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SPEECH ACTS AND READING ACTS: AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN THE TWO PROCESSES

by

© GEORGE DONALD LABERCANE

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

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DEDICATION

To: Dr. John A. Jenkinson,
who taught me the value
of philosophical analysis.

ABSTRACT

The purpose of this investigation was to examine the relationship between a general theory of speech acts as delineated by Austin (1962), Searle (1969), and others, and a proposed general theory of reading acts. Although the nomenclature of speech acts is markedly different from that of reading acts, attempts were made to establish conceptual links between these two somewhat disparate areas of study.

In elucidating the nature of the two areas of study, attempts were made to trace the history and theoretical foundations of speech acts. Correspondingly, related areas of the reading process were examined to note those sources of knowledge which have contributed to a fuller understanding of the process itself.

At the same time, attention was devoted to an analysis of reading comprehension and its relationship to meaning. Stern's (1971) seminal work in the analysis of "reading comprehension" was cited as a paradigm case of current philosophical analysis of reading terminology.

Basically it was assumed that the general theory of reading acts represents a critical method of reading inquiry; a general methodological approach to the analysis of written discourse. It is evident that the meanings of the individual words in a sentence clearly depend upon the interaction of word knowledge and context. Concurrently, there are the knowledge structures the reader brings to the text.

The general theoretical merit of a speech act approach is that it offers an alternate position regarding the relation between language and communication. In other words, a speech act theory attempts to integrate the best available information concerning sentences with recent

philosophical analyses of the functions of speech. Consequently, it is now possible to simultaneously investigate communicative and abstract linguistic factors within a single unit and without the traditional problems attendant on the dichotomy of structure and function.

In this regard, reading acts are an integral part of acts of language. Speech acts are acts of language in that it can be assumed that by saying something we do something when we make an utterance. Reading acts also entail the notion of action. The reader (like the speaker) must make logical inferences, pragmatic inferences, coordinate reference, and supply suppositions about an author's intentions. As such, the reader must make inferences concerning the motives and mental states of characters, antecedent and consequent events, instrumentality, and illocutionary force as well as propositional content.

Hence, the results of this study suggest that a general theory of reading acts represents the logical outgrowth from a general theory of speech acts. Within this general theory of reading acts are subsumed all of those processes which psychologists, linguists and reading educators, amongst others, conceptualize as being an integral part of the total reading process. Moreover, a general theory of reading acts can be seen as an integral part of a general theory of communicative competence.

Throughout the course of this investigation, emphasis has been placed upon establishing conceptual "links" between speech acts and reading acts. The resolution of the differences between speech acts and reading acts has not been achieved. What has been achieved, it appears, is a general method of inquiry which, hopefully, will have laid the groundwork for subsequent research and investigation.

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Ce que l'on conçoit bien s'énonce clairemont,
Et les mots pour le dire arrivent aisément.

L'Art Poet, i. 153
(Boileau)

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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

I. INTRODUCTION

Language is the basis of our communicative intentions, the nexus between sound and symbol, the link between reality as it is perceived and reality as it is shared. Language is also the means whereby we are enabled to replace the code of gestures and posturing with the codes of the spoken and written word. Moreover, it is from the ordinary understanding of language that the logical analysis of language departs and it is ordinary language which, in a number of important ways, sustains such an analysis. In looking at the question of how language is to be perceived, Wittgenstein (1953) provides us with further insight with his observation that ordinary language exhibits aspects more subtle, variable and contextual than are apparent in a formal structure.

The study of language as a process encompasses a wide area of investigation. The spectrum of disciplines concerned may range across such diverse topics as anthropology and kinesiology. Generally, however, the sources of knowledge for our understanding of language are in the main drawn from the fields of linguistics, psycholinguistics, psychology, information processing and philosophy.

The "revolution in philosophy" about which much has been written describing contemporary philosophical developments, began when the change from Absolute Idealism to types of linguistic

philosophy occurred in the first quarter of this century. The awareness of the central importance of the word, of language games, of the "meaning of meaning" were all responsible for this present day focus on language by philosophers. Philosophy became an activity of analysis or insight into the misuses and abuses of language. The challenging of certain conclusions of the philosophers by linguists, notably Noam Chomsky (1957, 1965), advanced the study of and research into language.

The work of J. L. Austin (1962) in the field of ordinary language philosophy culminated in his consideration of what he termed Speech Acts. Correspondingly, we feel that the logical equivalent in the field of reading would be what I have termed reading acts, and it is with this concept as well as the concept of speech acts that our study will be concerned. The term reading acts is a hypothetical construct and we shall attempt an analysis of the term at a later point in our study. The bulk of research studies into the bases of the nature of the reading process (Goodman, 1968; Jenkinson, 1969; Smith, 1971, 1973) support the contention that reading acts are an integral part of the total language process, the exact nature of which is still very much a matter of great debate.

For a long time, research in the field of reading concerned itself with findings from the areas of perception and cognition, areas of study that were heavily influenced by psychological theory. Recently, a great deal of interest has been generated by reading researchers into the study of linguistics and research that is generally linguistic in its orientation. Information processing

theory, as an area of study apart from linguistics, has also had a considerable impact on the development of a number of models of the reading process (Smith, 1971, 1973; LaBerge and Samuels, 1974). However, both linguistics and information processing theory have reached an impasse with regard to the question of meaning. As a consequence, the relatively new field of psycholinguistics has occupied a major role as the principle discipline concerned with the problem of how meaning arises in language. Semantics, too, has enjoyed a resurgence, and philosophical theories (e.g., Grice, 1957) have been adopted by linguists interested in questions regarding the interaction of syntax and meaning. In the field of reading, however, only a few individuals have suggested that philosophical speculation and theories might assist in the elucidation of meaning in reading (Jenkinson, 1969; Stern, 1971).

Philosophers, on the other hand, have been concerned with the question of meaning since the time of Plato. In recent times, the concern that philosophers have expressed has been with the "analysis" of language and with how meaning is obtained by and through language. Russell (1912) and Moore (1922) were among the first to challenge the current philosophy of their day by proposing that the metaphysical conversations of philosophers be replaced with "tasks" involving "analysis." Wittgenstein (1953) was to pick up the thread of this suggestion and weave it into the elaborate tapestry he referred to as "language games." It was his contention that the majority of philosophical questions turned upon the meaning of the language in which the questions were posed. This led to the necessity for

analysing and clarifying the question so that discussion could proceed more profitably. This analysis, clarification and re-statement of problems became part of the "revolution in philosophy." Wittgenstein felt that our "intelligence was bewitched" by the way language was used, while Austin (1962), in his investigations of language, concentrated on what he termed "the total speech act in the total speech situation." This provided a general concept of linguistic inquiry which is somewhat similar in goals and spirit to the investigation of natural phenomena in science.

Searle (1969) in his book entitled Speech Acts: An Essay in the Philosophy of Language, adopted Austin's general theory of speech acts, but he elaborated, extended and clarified the basic notions which made up the concept of speech acts, coming to the conclusion that "speaking a language is engaging in a rule-governed form of behavior."

II. PURPOSE OF THE STUDY

The essential purpose of this dissertation is to explore the relationship between the general theory of speech acts as revised by Searle (1969) and a proposed theory of what I have termed reading acts.

It is important to keep in mind that we shall be dealing with two apparently distinct and somewhat disparate approaches to the study of language. The general theory of speech acts is a theory embedded within the context of ordinary language philosophy. Theories of reading, on the other hand, are generally grounded in the findings

of psychology, information theory, linguistics and psycholinguistics. However, if we can assume that speech acts and reading acts both represent language processes, we may be able to find points of commonality between the two areas of study. The general theory of speech acts is a theory of language functioning and as such provides explanatory power as to how the structure of language operates in a communicative setting. By "grafting the study of speech acts onto the study of syntax" we should be in a stronger position to provide a fuller thesis for explaining the role of reading acts within the total language process.

III. OVERVIEW

The main purpose of this thesis being the examination of speech acts and reading acts, we shall plan our study in the following manner:

In Chapter II we shall examine in historical perspective, the relevant writings of philosophers who may be classed under the heading of ordinary language philosophers. It may be expedient to take notice of the writings of any philosopher who has entered, however temporarily, the domain of ordinary language philosophy.

In Chapter III, a detailed examination of the general theory of speech acts will be undertaken. Basically we shall focus on the writings of John R. Searle who extended and clarified the work of J. L. Austin in this area. Any other philosopher who has elaborated or criticized the work of J. L. Austin and J. R. Searle will also be carefully adjudged.

The approach to meaning and reading comprehension will not be undertaken from the aspect of a skills dimension. Rather, in Chapter IV, we shall analyze the role of meaning and understanding within the process of the reading act itself.

Correspondingly, in Chapter V, it will be necessary to study any psychological or linguistic research in the field of reading which we feel is relevant to the task in hand. Since we have not been able to locate any researcher in the reading field who has focussed on the concept of reading acts, we shall have to range over a wide field of reading studies to discover information relevant to speech acts and reading acts. This will necessitate a brief historical overview of the research into the reading process though we shall deliberate particularly on the area of reading comprehension or reading understanding.

In Chapter VI, we shall attempt to fit or accommodate the concept of reading acts into the framework of the general theory of speech acts, and to consider the concept of meaning as it is envisaged from the standpoint of the reading process in order to fit this viewpoint into Searle's illocutionary act theory of meaning.

Chapter VII will comprise the summary, conclusions and recommendations of our study as a whole. This final chapter will assess the success of our endeavours and will hopefully provide us with the basis from which subsequent research may be engendered.

IV. SIGNIFICANCE OF THE STUDY

The significance of this study rests upon the contention that a study of the general theory of speech acts as developed by Austin (1962), Searle (1969), and others represents a useful way of coming to a clearer understanding of what I have chosen to call reading acts. Miller (1970) states that scientific psychology has still not outgrown the need for continued philosophical analysis of its conceptual foundations. He emphasises that much of what philosophers have said (and continue to say) about natural languages is of great importance for anyone interested in psycholinguistics. The same arguments hold for those who are interested in gaining further insight into the nature of the reading process.

Hence, if semantic competence is viewed as one's ability to use sentences to perform speech acts, then it can be contended that the study of speech acts represents an integral lead-up to a study of reading acts. Therefore, the goal of this study is to help define the unique nature of reading acts as they diverge from speech acts. To do this, we shall be constrained to operate within certain parameters, parameters which will be determined in accordance with our success in arguing for the study of speech acts as being analogous to the study of reading acts. Thus, while we are arguing for the uniqueness of the concept of reading acts, we are nevertheless arguing for certain mutual acquaintances which we feel hold between the two processes.

Chapter II

THE ORDINARY LANGUAGE MOVEMENT IN PHILOSOPHY

HISTORICAL BASIS

The sharing of experience through communication is one of the most important processes in our life together as human beings. The task of seeking after a fuller understanding of language is therefore an extremely important one. In this regard, a movement which might broadly be designated as "analytic philosophy" came into being at the beginning of the present century in England and today is regarded as one of the most influential movements among philosophers in the English speaking world. Analytic philosophy may be regarded as a way of thinking that emphasizes the logical dissection of concepts, statements and sentences to reveal their accurate meaning. Without such a clear, accurate and systematic understanding of a problem one inevitably falls into misunderstandings and confusions.

The prominent philosophy in Britain at the end of the nineteenth century and the beginning of the twentieth century was a type of idealism called by Paton (in Warnock, 1969, p. 2) "Hegelianism modified by Anglo-Saxon caution." The foremost British proponents of this branch of idealism were F. H. Bradley (1893) and Bernard Bosanquet (1885).

The principal protagonists in the revolution against the metaphysics prevalent during the time of Bradley and Bosanquet were their pupils, G. E. Moore (1922) and Bertrand Russell (1956). In point of fact, it was a paper by G. E. Moore entitled the "Refutation

of Idealism" (1903) which set in motion the processes of decay of this doctrine, and paved the way for another kind of philosophy called realism. The basic tenet of realism was that the external world did exist independently of the mind, whereas idealism had denied this independence.

Moore's method of philosophical questioning was characterized by simplicity and directness and his mind evidently worked most naturally in concrete terms. It was his exacting standards of analysis which finally led him to the conclusion that an enormous amount of philosophical writing was marred by hastiness, unclear thinking and confusion. The end product of Moore's questioning seemed to lead to an attack at the very foundations of all the current philosophical structures of his day.

In examining Moore's approach to philosophy, one is led to the conclusion that there was little left for philosophical discussion. However, he felt that the predominant task for the philosopher involved what he termed "analysis," the clarification of language. The task of "analysis" encompassed a list of "truisms"—such as the discovery that one has a body, that one was born a certain number of years ago, and that one has lived since that time on or near the surface of the earth.

One might best summarize Moore's philosophical outlook consisting as it did in the pursuit of analysis, as being a philosophy which saw as its "business" the task of clarification and not discovery. Moore contended that no thinker was able to deal with any serious problem without careful analysis. To deal with any problem,

one's understanding of it must be clear, accurate and systematic. Without such discrimination one faced the real danger of falling into confusion and errant thinking. Hence, Moore emphasized that the philosopher's concern was with meaning and only secondarily with truth.

Russell (1956) agreed with Moore that analytic philosophy fills an essential role, but his training in mathematics caused him to view the relation of analysis to responsible thinking in the same way as he viewed the relationship of mathematics to the sciences. Russell was fond of saying that philosophy ought to be, as it had never yet been, "scientific"—not only not less rigorous and exact, but more so, than mathematics and the physical sciences.

Russell's approach involved the analysis of facts rather than things. As he says,

> . . . the things in the world have various properties, and stand in various relations to each other. That they have these properties and relations are facts, and the things and their qualities or relations are quite clearly in some sense or other components of the facts that they have those qualities or relations.
>
> The analysis of apparently complex things . . . can be reduced by various means to the analysis of facts which are apparently about those things . . . (Russell, 1956, p. 192)

Hence facts, since they have components, must be complex and therefore be susceptible to analysis. Moreover, Russell suggests that facts are stated in propositions, and propositions in turn are complex. Such propositions are put together out of words. However, some words are quite simple, that is, unanalysable, and these words are said to be simple symbols. The word "red" is an example, and Russell classified words like "red" as simple predicates. Contrasted

with simple symbols of this sort, there exists simple symbols of another sort, namely proper names—the words by which we can refer to the particular things to which predicates are ascribed. Hence, the simplest sort of proposition will be that one which consists solely of a proper name and a simple predicate. Russell calls such sorts of propositions "atomic propositions" and the resultant facts stated by such propositions are given the appelation "atomic facts."

Furthermore, out of atomic propositions one can construct more complex propositions. We can, for example, simply join two or more atomic propositions with the words "and" or "or." The end result of this conjoining is what Russell came to call a molecular proposition. However, he disclaimed the notion that there could be molecular facts. For example, if we consider the molecular proposition "this is red and that is brown" what would make this true would not be one molecular fact but rather the two atomic facts of the proposition. Consequently Russell concluded that molecular propositions are "truth-functions" of atomic propositions. In other words, their truth or falsity is solely dependent upon the truth or falsity of the atomic propositions of which they are composed. Therefore, although it is necessary to have atomic facts to determine the truth or falsity of atomic propositions, we do not also require molecular facts. The whole scheme was termed Logical Atomism.

In analyzing Russell's views, one can see the plausibility of this thesis on at least two counts. In the first place it appeared to have a kind of consistency with the philosopher's task of analyzing the gross and complex constituents of human experience into their

simplest elements.

Secondly, Russell had, no doubt, been influenced by recent developments in logic. Principia Mathematica, the outgrowth of the thought of both Russell and Whitehead (1910), represented a system of notation which ostensibly covered the whole of logic and philosophy. The form of the notation was explicitly truth-functional; even the most elaborate formulae stateable in it were constructed out of a few very simple forms. Russell (1956) spoke of this notation as constituting a "logically perfect language." This "logically perfect language" contained no vocabulary, but it included at least the syntax of a perfect language. On the basis of the foregoing, Russell was to assume that all propositions whatever, which do not themselves state simple facts, must be truth-functions of those which do.

Russell's "aim" seems to have been to offer "a new metaphysic." Basically, he was propounding an ontological doctrine—telling the world what ultimately, in the final analysis, exists in the universe. This doctrine was not empirical in nature; rather it seems to have been arrived at as a deduction from a non-empirical analysis of language as to the nature of that reality which language attempts to describe.

The idea of a more rigorous type of philosophy, more scientific in character, was put forward by a group of philosophers known as the Vienna School, and whose adherents came to be called Positivists. They took over the theory of logic handed on by the realists, except for a different interpretation of the nature of logical form. The most important departure of the positivists from the presuppositions of the realists was an uncompromising rejection of metaphysics. The realists

believed it possible to replace the speculative cosmologies with a scientific metaphysics, but the positivists rejected this notion. They adopted a theory called the "Verification Principle," the essential significance of which is best stated negatively: Unless one can specify a procedure by which a given assertion is testable, so that either it or the contradictory assertion can be confirmed by adequate evidence, the assertion not only has no right to claim truth—it has no sense. On this basis, therefore, only hypotheses capable of being investigated by the methods of science have sense; the doctrines of metaphysics are senseless, i.e., without meaning.

It was A. J. Ayer who, in his book Language, Truth and Logic (1936), introduced into England the tenets of the school of the logical positivists. He himself was an ardent supporter of this school. This particular philosophical outlook saw the constructive task of philosophy as involving simply the clarification of logical analysis, of the concepts and statements employed by science. If a positivist moves outside these concepts, he does so to reveal the confusions into which those who do not respect the rules of meaningful language have fallen. Wittgenstein (1922), in his first major work, expresses this orientation very succinctly by saying, "Whatever can be said can be said clearly" (i.e., in the purified language of science). And "whereof one cannot speak, thereof one must be silent" (pp. 79, 189).

The difficulties inherent in the positivists' creed caused philosophers to review the situation. The basic presuppositions held in common by the school and by the philosophers of ordinary language, as well as the differences between them, can best be introduced by

consideration of the two major books of Wittgenstein: the Tractatus Logico-Philosophicus (the English translation first appeared in 1922) and the Philosophical Investigations published in 1953. The former had inspired the rise of logical positivism, and the latter contained the basic tenets of the school of the ordinary language philosophers. It is not the business of philosophy to offer a comprehensive theory of the universe: its proper concern is really with such questions as how words mean what they mean and what we need to do to use them correctly. One can easily be misled by seductive analogies into assuming that one's meaning is clear when it is not, and it is in this way that misunderstandings and confusions arise. As Wittgenstein remarks, "An unsuitable type of expression is a sure means of remaining in a state of confusion. It as it were bars the way out" (Philosophical Investigations, p. 339). The true function of philosophy is to uncover the source of the confusion, and reorganize the expression.

Although Wittgenstein (who was a pupil of Russell's) initially adopted the Russellian view of language, he soon abandoned some of its basic tenets. Wittgenstein came to the conclusion, after a number of years of thought and study, that Russell's non-empirical account of language was not, in fact, the exposure of something deeply concealed; rather it was in reality the foisting of an invention upon the facts. In sum, Wittgenstein, in his later years, came to reject some of the basic assumptions that were an integral part of his earlier views on language. The first of these was the view that language is essentially used for one purpose, the stating of facts. Secondly, there was the view that sentences essentially get their meanings in one way, namely

through "picturing." Thirdly, there was the view that any language has, though it may be hard to see it, the clear and firm structure of the formulae in a logical calculus.

The rationale underlying Wittgenstein's rejection of his formerly held opinions is found in the thesis he came to adopt which stated that "the more narrowly we examine actual language, the sharper becomes the conflict between it and our requirement" (Philosophical Investigations, 1953, p. 66). One is thus constantly made aware of the variety in the actual or possible uses of words and driven further away from the idea that language has just one use. To illustrate this point, Wittgenstein draws our attention to the various uses in existing languages, and, further, imagines possible languages simplified in such a way as to bring their manifold variety clearly into view.

In this regard, Wittgenstein would have us consider the related notion that words obtain their meanings in some particular singular fashion. Perhaps, he says, "one thinks that learning a language consists in giving names to objects" (Investigations, p. 107). However, there are many words that could not be thought to be names of anything. Besides, what is "giving a name" to something? Perhaps it involves pointing at it and uttering the name. However, if this is to be successful, the performance must be understood in the proper way; there are always many different ways in which it could be misunderstood. For example, if you point to something and say, "That is oval," I shall thereby learn what "oval" means only if I already understand that you are referring to its shape. Moreover, how does this

differ from referring to its color, or to the object itself?

Wittgenstein pursues this notion further by stating,

> How he (the speaker) "takes" the definition is seen in the use that he makes of the word defined—and since there are very many different uses even of common names and adjectives, it is clear that learning by the supposedly single process of being "given the name" must really be no less various. Even naming has to be understood in as many ways as there are uses of names. "What is the relation between a name and a thing named?—Well, what is it?" (Investigations, p. 30)

Pursuing this notion further, Wittgenstein asks us to consider next the structure of language. Is it the case, he asks, that the propositions we ordinarily utter are complex, built up in accordance with precise rules of construction from exactly specifiable simpler elements? Wittgenstein attempts to clarify this point by stating that,

> in philosophy we often compare the uses of words with games and calculi which have fixed rules, but cannot say that someone who is using language must be playing such a game. (Investigations, p. 37)

Wittgenstein goes on to warn us that it is essentially false to say that a language embodying clear and fixed rules would be an "ideal" language. For,

> the most that can be said is that we construct ideal languages.

These are obviously not better or more "perfect" than our ordinary language. It is not as if it took the logician to show people at last what a correct sentence looked like. Wittgenstein lends strength to this view by saying that,

> the more narrowly we examine actual language, the sharper becomes the conflict between it and our requirement . . . We see that what we call "sentence" and "language" have not the formal unity that I imagined, but are families of structures more or less related to one another. (Investigations, p. 103)

Consequently the idea of an underlying "crystalline purity" was not the result of investigation; it was a preconceived idea. Hence the "perfect language" of Logical Atomism was not a discovery, something uncovered beneath the confused wrappings of ordinary language; it was something invented, which gave to its inventors the illusion that they had "found it."

The question that immediately comes to mind is, "How is it possible that such clear thinkers as Russell and the earlier Wittgenstein could have missed the criticisms that the later Wittgenstein had raised vis-a-vis language?" Wittgenstein's own answer was that confusion and error arose, not because of an error in fact or logic, but rather in the way people looked upon language. The conclusion that he came to was that people were bewitched by the language. Moreover, the source of their bewitchment was language itself. We have, argued Wittgenstein, to resist "the bewitchment of our intelligence by means of language." These are, he says, superstitions "produced by grammatical illusions" through a misinterpretation of the "forms of language." Therefore, we must look "into the working of our language, and that in such a way as to make us recognize those workings, in despite of an urge to misunderstand them."

What is meant by "the bewitchment of our intelligence by means of language?" Warnock (1958) states that it is

> as if the surface of our language were thickly covered with well-trodden paths, and we are constantly tempted to follow those paths even when they did not lead in the direction we were trying to go. (p. 75).

In Wittgenstein's account of the ways in which such predicaments surface, two elements seem to be apparent. First of all, there

is the fact that the verbal or grammatical forms of our language are evidently less various than are the actual uses of words. Such traditional grammatical categories as noun, adjective, verb appear to be fairly straightforward. But the ways in which words are actually used are incredibly more diverse and complex than their grammatical terminology suggests. For example, "pink," "proud," "ambitious" qualify as adjectives in the traditional terminology; "believe," "walk," "see," seem to fit the category of verb; "table," "wall," "fortress" ostensibly qualify as nouns. But cutting across all these resemblances are immense divergences of use. At the same time, however, it is not clear just exactly what it is that constitutes these divergences.

In addition to the foregoing point just raised, we tend to become prone to the liability to be swayed, or even "enslaved," by what Wittgenstein often calls "pictures," or what could also be called models or standard cases. Wittgenstein, in attempting to substantiate his claim, asks us to consider the notion of proof. There are, he says, proofs of many sorts—geometrical proofs, scientific proofs, proofs of the pudding in the eating, and many others. However, it may be that a philosopher becomes obsessed with one kind of proof, a particular "picture" or model or standard of what it is to prove something; and as long as this picture retains its exclusive hold, this philosopher may feel obliged to maintain in the teeth of paradox that nothing else is really a proof at all, perhaps even that we do not really know anything but what can be proved in his ideal or standard way.

Wittgenstein goes on to point out that there is also a characteristic way in which puzzlement concerning a proof may arise and thereby become chronic. In other words, there is a certain temptation to suppose that such a question as "What is a proof?" is a question to be answered just by thinking, as it were by inwardly surveying the idea of a proof—by attempting to discern (in Moore's terms), "what comes before our minds" when we say "a proof." It is against just such a notion that Wittgenstein directs the injunction, "Don't think, but look!" For,

> does the whole use of the word come before my mind when I understand it in this way? No! The same picture, whatever it may be, simply presents itself over and over again. I repeatedly trace round the frame through which I look at it; constantly seem to confirm my preconceived idea; and never think of looking to see what in fact proofs are, how many kinds of procedures are called 'proofs,' and how familiar really these various procedures are. (Investigations, pp. 139ff.)

Wittgenstein's "remedy" for solving this dilemma is that the actual uses of the word must be identified and described—"we must do away with all explanation, and description alone must take its place" (Investigations, p. 109). However, this description must not be haphazard and undirected; it "gets its light," i.e. its purpose, from the philosophical problems. These are, of course, not empirical problems; they are solved, rather by looking into the workings of our language, and that in such a way as to make us recognize those workings: in despite of an urge to understand them. The problems are solved, not by giving new information, but by arranging what we have always known.

Further progress in the ordinary language philosophy

orientation was made by Gilbert Ryle (1949) whose best known work "The Concept of Mind" dealt in part with some of the confusions in language. His articles, "Systematically Misleading Expressions" and "Ordinary Language" contained what might be termed the negative trend in ordinary language philosophy.

For the past two or three decades a new and more positive trend has appeared in the evolution of the philosophy of ordinary language. In place of the emphasis on the correction of specific confusions into which other thinkers had fallen, the positive emphasis took a form which attempted to develop a general philosophical theory. This, of course, could not be effected until preliminary studies had taken place. Toulmin's "The Uses of Argument" (1958) and Strawson's "Individuals" (1959) sought to lay bare the requisite conditions of any use of ordinary language. However the pioneer in this area was J. L. Austin (1961, 1962a, 1962b) who, since 1940 contributed papers leading in this direction. In Austin's work, as well, the description of language is global in its outlook. There are, however, marked differences between the two in terms of manner and motive. On the one hand, Wittgenstein was interested in large, or to use his own word, "deep" conceptual distortions; and it seems reasonable enough to suppose that a large-scale, general distortion of thought could properly be attacked by means of a comparably broad and general description of language. In any event, Wittgenstein's own descriptions were not, as a rule, protracted or detached or highly systematic; they often took the form of hints, clues, and pointers than of set exposition. Austin's method, on the other hand, was to concentrate

in detail on our language, paying special attention to the nuances of that language.

Austin believed that there was something to be learned, both from language and about language. Hence, he was concerned with our every day language not merely, as Wittgenstein was, mainly, because it served to correct those prejudices which engender some philosophical problems, but also because it provided innumerable pointers to facts and distinctions. His aim was not merely to describe the workings of language, but also to learn from the description—to look through it, so to speak, at the facts about the world and our concern with the world which we have moulded, and continue to mould through our ways of speaking.

Austin was concerned not only to detect the fine nuances that are revealed in the ordinary uses of significant words, but to organize in a new and instructive fashion the hints they provide. In carrying out this task he pointed the way towards a systematic theory of certain types of use. Much of his earlier work seems to aim at a thorough treatment of "performatory" uses. He writes:

> Words are our tools, and, as a minimum, we should use clean tools: we should know what we mean, and what we do not, and we must forearm ourselves against the traps language sets us. Secondly, words are not (except in their own little corner) facts or things; we need therefore to prise them off the world, to hold them apart from and against it, so that we can realize their inadequacies and arbitrariness, and can relook at the world without blinkers. Thirdly, and more hopefully, our common stock of words embodies all the distinctions men have found worth drawing, and the connexions they have found worth making, in the lifetimes of many generations; these surely are likely to be more numerous, more sound, since they have stood up to the long test of the survival of the fittest, and more subtle, at least in all ordinary and reasonably practical matters, than any that you or I are likely to think up in our arm-chairs in an

> afternoon—the most favoured alternative method. (Austin, 1961, pp. 129-130).

Although the main thrust of Austin's deliberations had to do with language, his own views were markedly different from that of the grammarian. Austin's concern was with those distinctions already existent within language; distinctions which he felt were indispensable to the clarification of philosophical problems. For example, when dealing with a new concept, Austin felt it necessary, first of all, to make an inventory of variants of its meaning, of its cognates and of the differences of its application. His manner of proceeding in his analysis, which was characterized by a minuteness and rigour, is not universally appealing, and to many, the purpose of this kind of analysis appears extremely obscure.

However, Austin's interest in philosophical investigations had a deeper rationale which he expressed in his essay, "A Plea for Excuses" (1956). In it he wrote:

> When we examine what we should say when, what word we should use in what situations, we are looking not merely at words (or "meanings," whatever they may be), but also at the realities we use the words to talk about; we are using a sharpened awareness of words to sharpen our perception of, though not as a final arbiter of, the phenomena. For this reason I think, it might be better to use, for this way of doing philosophy, some less misleading name than those given above ("ordinary language," "linguistic or analytic philosophy," or "the analysis of language")—for instance, "linguistic phenomenology," only that it's rather a mouthful. (p. 130)

The work of J. L. Austin reveals the direction which is being taken by the movement which we call ordinary language philosophy. In his work, Austin moved a step beyond the analysis of language towards a more positive outlook, that of attempting to build an original kind

of philosophical system, an organized theory about the varied uses of language in light of the whole of philosophy, including metaphysics.

In the next chapter, we will examine in some detail the general theory of language expounded by Austin, the doctrine of illocutionary forces that arose out of his earlier distinction of performative and constative utterances, contained in How to Do Things With Words (1962). In addition, we will consider J. R. Searle's (1969) Speech Acts: An Essay in the Philosophy of Language as the natural outgrowth of Austin's seminal work in which the general theory of speech acts has been amended, extended and clarified.

Chapter III

SPEECH ACTS

I. J. L. AUSTIN'S GENERAL THEORY OF SPEECH ACTS

The culmination of the study of the philosophy of language undertaken by Austin (1962) gave rise to his general theory of speech acts. This theory of language is adumbrated in his notions of locutionary, illocutionary and perlocutionary acts. The elaboration and refinement of this theory was never undertaken by Austin who died before he was able to develop fully the theory. Rather, the further development of this theory was left to J. R. Searle (1969) who altered, clarified and expanded the general theory originally developed by Austin.

The term "speech situation," in its most elemental form indicates that normally we have a speaker, a hearer or hearers, and the speaker's utterance.[1] The term "speech act" indicates that there is something more attached to a speech situation, as shown by the word "act." We must assume, of course, that the speaker's utterance is within our experience since some well-formed sentences like "The

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[1] R. N. Bosley (personal correspondence) talks about the notion of CONTINUITY which he refers to as continuity of doing. Consequently, in a speech act situation, it would be inappropriate to begin by saying, "if p" and then stopping; one is required to go on, and that in certain (relevant) ways. Hence, the basic moves here may involve the initiating, continuing and completion of a speech act (or in Bosley's terminology, a basic P-Level case or utterance).

blue horses were smoking crimson oranges" can make no sense to us.

Austin himself insisted that the distinction between saying and doing is of great importance. In numerous instances, claims Austin, we use words not just to say something, but also to do something. For example, in an expression such as "I promise," the utterance of the words themselves is an act. When spoken under appropriate conditions, it introduces a new fact into the situation, namely, that the person who spoke those words has placed himself under an obligation to do something. Utterances of this sort were labelled "performatives" and initially they were contrasted with utterances called "constatives." Constative utterances are those sayings whose primary function is just to say something, as in the conveying of information. Examples of constatives are:

That cat is brown.

or

The table is red.

For a time Austin appeared to have been well satisfied with this distinction. However, although the initial formulation proved useful at a certain level of explication, it soon became evident that there were some grounds for doubt as to whether such a distinction was ultimately useful. In the course of further exploration and experimentation, Austin found it impossible to provide satisfactory criteria for distinguishing "performative" utterances from other speech acts. After considerable deliberation and thought, Austin finally came to the conclusion that it was impossible to give satisfactory criteria for distinguishing the performative from other utterances.

Now in order to replace this less than satisfactory distinction of performatives and constatives, Austin introduced the theory of illocutionary acts (or, in broader terms, the general theory of speech acts). The basic premises of the theory seemed to run like this—whenever a speaker says anything, he performs a number of distinguishable acts. There is, for example, the phonetic act of making noises, and the phatic act of uttering words in conformity with certain rules, namely the grammar of the language spoken. Combined with the foregoing is the rhetic act of using the words with a certain more or less definite sense and reference. All three "acts" are part and parcel of the locutionary act of using an utterance with a more or less definite sense of reference as, for example, "That bus is going to the University"—reference to a certain bus.

The second aspect of the general theory of speech acts is the illocutionary act, an act which may be performed in uttering the locutionary act. Finally, we have the perlocutionary act which is an act one may succeed in performing by means of an illocutionary act.

To determine what illocutionary act is performed, we must determine in what way we are using the locution. Are we, for example, asking or answering a question? Are we giving some information, or assurance, or a warning? Are we announcing a verdict or intention? Austin uses the term "illocutionary forces" to exemplify those different types of function that language undergoes in the performance of an illocutionary act. According to this view, it is as essential to distinguish force from meaning as it is to distinguish sense from reference within meaning.

In conjunction with the locutionary and illocutionary dimension (i.e. the performance of the locutionary act _of_ saying something, and the performance of an illocutionary act _in_ saying something) the _perlocutionary_ act is performed _by_ saying something. "Perlocutionary" is the term applied to any act insofar as it provides certain intended or unintended effects upon the feelings, thoughts or actions of the hearer or audience, of the speaker, or of other persons. For example, in shouting "Down with the Liberal Party!" I may succeed in the perlocutionary act of bringing about a revolution (or, at least, an election), whereas in performing the locutionary act I would be inciting or urging my hearers into engaging in unlawful (or inflammatory) acts.

Austin raises an interesting point in his discussion of speech acts when he states that to speak of the _use_ of a language may create harmful side effects by blurring the distinction between illocutionary and perlocutionary acts. This may result in much the same manner that expressions such as "meaning" and the "use of a sentence" tend to confuse those same distinctions. Hence, speaking of the "use of language for arguing or warning" looks just like speaking of the "use of language for persuading, rousing or alarming." Yet the forms may, for rough contrast, be said to be _conventional_, in the sense that at least it could be made explicit by a performative formula, while the latter could not. In other words, one may say, performatively, "I can argue that . . .," or "I warn you that . . .," but cannot say, "I convince you that . . .," or "I alarm you that . . .." Moreover, it is further pointed out that the expression "the use of language"

can cover other matters even more diverse than the illocutionary/perlocutionary dimension. One may, for example, speak of the use of language in poetry, or for joking. Again, one may use language to make insinuations, to describe or express our feelings as in one form of the act of swearing.

It is important to emphasize here that the illocutionary act is in no way the consequence of the locutionary act, nor does it consist in the production of consequences. Rather, to perform an illocutionary act is essentially to perform a locutionary act. For example, to congratulate is necessarily to say a few words. The essential point which requires emphasis is that what we do bring in by the nomenclature of illocutionary is a reference, not to the consequences (at least in any ordinary sense) of the locution, but to the conventions of illocutionary "force" as bearing on the special circumstances of the utterance. As a consequence, almost any perlocutionary act is liable to be induced, in sufficiently special circumstances, by the issuing, with or without calculation, of any utterance whatsoever. However, the range of illocutionary acts that may originate from a given utterance is restricted by the conventions of illocutionary force. The performance of an illocutionary act involves "the securing of uptake." This term refers to the understanding of what is said and the appropriate action resulting from the speaker's utterance. A speaker who utters a warning cannot be said to have warned his audience unless it understands what he says and acts appropriately to the admonition given.

Austin's "Families" of Speech Acts

In relinquishing his original distinction between performative and constative utterances in favour of the general theory of speech acts, Austin further proposed a classification system of illocutionary acts. He advanced his five categories very tentatively, more as a basis for discussion than as a set of established categories. Needless to say, he was not perfectly happy with the taxonomy and he went to some lengths in Lecture XII of How To Do Things With Words to show how the various classes overlap and how the verbs which he selected are subject to more than one classification. The five categories run as follows:

Verdictives. Utterances of this class are typified by the giving of a verdict, as the name implies, by a jury, arbiter, or umpire. However, they need not be final. They may involve an estimate, a reckoning or an appraisal. Basically verdictives are concerned with giving a finding as to something—fact or value—which is for different reasons hard to be certain about. Some examples of verdictives are: acquit, reckon, convict, rule, estimate, find (as a matter of fact), measure, etc.

A verdictive is a judicial act as distinct from legislative or executive acts; acts which Austin claims are exercitives. Verdictives have obvious connections with truth and falsity as regards soundness and unsoundness, fairness and unfairness. A pertinent example is the example where an umpire's calling "out," "strike three," or "ball four" is the occasion for a great deal of heated debate.

Exercitives. These involve the giving of powers, rights or influences. An exercitive is the giving of a decision in favour of, or against a certain course of action. It is a decision that something is to be so, as that it should be so, as opposed to an estimate that it is so. It is an award as opposed to an assessment; a sentence as opposed to a verdict. Its consequences may be that others are "compelled" or "allowed" or "not allowed" to do certain acts. Some examples of exercitives are: appoint, dismiss, order, sentence, excommunicate, command, fine, name, select, etc.

Commissives. Utterances of this kind are exemplified by promising or otherwise undertaking; they commit you to doing something, but may also include declarations or announcements of intention which are not promises. In addition, Austin adds a vague category which he calls espousals, as for example, siding with. Commissives have obvious connections with verdictives and exercitives. Some examples of commissives are: promise, undertake, mean to, covenant, intend, plan, contract, give my word, purpose, etc.

Behabitives. These utterances represent a miscellaneous group and have to do with attitudes and social behaviour. They include the notion of reaction to other people's behaviour and fortunes, and of attitudes and expressions of attitudes to someone else's past conduct or imminent conduct. There are evident connections with both stating or describing what our feelings are and expressing, in the sense of venting our feelings, though behabitives are distinct from both of these. A few examples are: for apologies we have "apologize"; for thanks we

have "thank"; for sympathy we have "deplore," "commiserate," "condole," "sympathize," etc.

Expositives. Austin felt that utterances of this kind were different yet difficult to define. Expositives make plain how our utterances fit into the course of an argument or conversation, how we use words, or, in general, represent expository utterances.

Expositives are thus used in acts of exposition involving the expounding of views, the conducting of arguments, and the clarifying of usages and of references. Some examples of expositives are: affirm, deny, state, describe, class, swear, report, postulate, deduce, and illustrate.

The foregoing taxonomy provides a suitable framework for further discussion and elaboration. Searle (1976) criticizes the taxonomy on the basis that it is not a classification of illocutionary acts but of English illocutionary verbs. Moreover, in Searle's view, the most important weakness of the taxonomy is that there is no clear or consistent principle or set of principles on the basis of which the taxonomy is constructed. As an alternative, Searle (1976) proposes a set of principles upon which a successful classification system may be built (p. 10ff.)

Austin's Doctrine of Infelicities

In the course of his discussion on performative utterances, Austin came to the conclusion that for every illocutionary act there is a relatively small set of necessary conditions on the intentions, beliefs, desires and external circumstances of the speaker and addressee

who are performing the illocutionary act. These conditions are called felicity conditions.

The primary function of felicity conditions is to characterize felicitous illocutionary acts and thus indicate the various ways that illocutionary acts can go wrong. This function is based upon the premise that the illocutionary force of an utterance is not strictly speaking true or false, unlike the proposition expressed by the utterance.

Austin distinguished various types of felicity conditions according to the following taxonomy:

(α.1) There must exist an accepted conventional procedure having a certain conventional effect, that procedure to include the uttering of certain words by certain persons in certain circumstances, and further,

(α.2) the particular persons and circumstances in a given case must be appropriate for the invocation of the particular procedure invoked.

(β.1) The procedure must be executed by all participants both correctly and

(β.2) completely.

(γ.1) Where, as often, the procedure is designed for use by persons having certain thoughts or feelings, or for the inauguration of certain consequential conduct on the part of any participants, then a person participating in and so involving the procedure must in fact have those thoughts or feelings, and the participants must intend

so to conduct themselves, and further,

(γ.2) must actually so conduct themselves subsequently (from Austin, 1962, pp. 14-16).

Violations of the (α) or (β) conditions are called misfires while violation of the (γ) conditions are termed abuses. In the former case, the illocutionary act involved is said to be void while in the latter it is said to be hollow. Violations of the (α) conditions are called misinvocations (act disallowed) with violations of the (α.1) being termed non-plays, and (α.2), misapplications. Violations of the (β) conditions are called miscarriages (act vitiated) with (β.1) violations being called flaws or misexecutions and (β.2) violations being called hitches or non-executions. Among the violations of the (γ) conditions, violations of the (γ.1) type are called insincerities or dissimulations, while those of (γ.2) are called non-fulfillments, disloyalties, infractions, indisciplines or breaches.

II. SEARLE'S REVISED VERSION OF THE GENERAL THEORY OF SPEECH ACTS

The general theory suggested by Austin under his tripartite plan of locutionary, illocutionary and perlocutionary acts was, in part, rather imprecise and lacked clarity. Searle, in accepting this situation, set about clarifying the concepts, and attempted to make more precise and definite the ideas contained in Austin's schema. One of his first steps was the rejection of the use of the word "force" in the phrase "illocutionary force," possibly following an objection to this term by Cohen (1964). However, the word "force" was not entirely eliminated but was relegated to a minor position. This

notion will be clarified later.

The second point made by Searle is that in a large class of cases—certainly all those involving the performative use of illocutionary verbs—there is no way of abstracting the locutionary act which does not involve an illocutionary act with it. Abstracting the meaning of an utterance will necessarily result in abstracting the illocutionary "force" of that utterance wherever that force is included in the meaning. Thus Searle concludes that the locutionary-illocutionary distinction is not completely general because some locutionary acts are illocutionary acts. Further studies of this apparent Austinian distinction led him to conclude that all the members of the class of locutionary acts (performed in the utterance of complete sentences) are members of the class of illocutionary acts. The justification for this conclusion comes from the view that every rhetic act, and hence every locutionary act, is an illocutionary act (emphases mine). And while Searle holds to the view that the two classes are conceptually different, the difference is not sufficient to establish a distinction between separate classes of acts, because "just as every terrier is a dog, so every locutionary act is an illocutionary one." Now, since a rhetic act involves the utterance of a sentence with a certain meaning and the sentence invariably, as part of its meaning, contains some indicator of illocutionary force, no utterance of a sentence with its meaning is completely force-neutral. Every serious literal utterance contains some indicators of force as part of meaning which is tantamount to saying that every

rhetic act is an illocutionary act.[1]

Searle does not, however, completely abandon the locutionary-illocutionary distinction established by Austin. In his view there are some important distinctions which need to be made regarding the locutionary/illocutionary dimension of speech acts. The first has to do with that part of trying (to talk) which consists solely in making a serious literal utterance and actually succeeding in performing an illocutionary act. The second has to do with that distinction between what a sentence means and what the speaker may mean in uttering it, with the special case of a serious literal utterance where the meaning of a sentence uttered does not completely exhaust the illocutionary intentions of the speaker making the utterance. In addition, Searle introduces a third distinction which he feels that Austin had in mind, but did not stress, when he said:

> With the constative utterance, we abstract from the illocutionary (let alone the perlocutionary) aspects of the speech act, and we concentrate on the locutionary. . . . With the performative utterance we attend as much as possible to the illocutionary force of the utterance, and abstract from the dimension of correspondence with facts. (Austin, 1962, pp. 144-145)

Searle's Further Development of the General Theory of Speech Acts

The foregoing comment made by Austin implies a distinction between the content, or the proposition, in an illocutionary act, and

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[1] N. J. Brown, in an address given to the Learned Societies of Canada in June, 1974, deals with the question of "force" by using what he calls the "language of entitlement." Hence Linguistic Entitlement can be expressed as follows: the force of an utterance is the entitlement given the hearer to assume a certain intention on the speaker's part.

the illocutionary type of the act itself. Searle argues that if one wishes to present this distinction in speech act terms (within a general theory of speech acts), a taxonomically promising way of effecting such a presentation might take the following form. There is, for example, a need to distinguish the illocutionary act from the propositional act—that is, the act of expressing the proposition (a phrase which is neutral as to its illocutionary force). In addition, the identity conditions of the propositional act are not to be seen as being the same as the identity conditions of the total illocutionary act, since the same propositional act can occur in all sorts of different illocutionary acts. When we are concerned with so-called constatives we do indeed tend to concentrate on the propositional aspect rather than on the illocutionary force, for it is the proposition which involves "correspondence with the facts." And when so-called performatives are considered, we attend as much as possible to the illocutionary force of the utterance.

Searle employs a certain specific kind of symbolic terminology to represent the sentence containing an illocutionary force-indicating device and a propositional content indicator in the following manner:

$$F(p)$$

The symbolic notation indicates where the range of possible values for F will determine the range of illocutionary forces, with p constituting a variable over the infinite range of possible propositions. In this form the distinction is not subject to the objections made to the original locutionary/illocutionary distinction. The propositional act is not represented, either in the symbolism or in natural

languages, by the entire sentence; rather, it is represented only by those portions of the sentence which do not include indicators of illocutionary force. Hence the propositional act is a genuine abstraction from the total illocutionary act, and as construed, no propositional act is by itself an illocutionary act.

There is one final objection to be made regarding Austin's general theory. The objection rests on the claim that the word "statement" is structurally ambiguous. The ambiguity evidently relates to what traditional grammarians call the act-object, or what is sometimes called the process-product ambiguity. A modern transformational grammarian's approach would be to say that the word "statement" is structurally ambiguous in that it has at least two derivatives from the verb "state" (i.e., two phrase markers containing the verb "state"). These two senses can be viewed in the statement-act sense and the statement-object sense. Hence, the word "statement" can mean either the act of stating or what is stated. The upshot of this qualification leads us to the conclusion that Austin's claim regarding statements being illocutionary acts holds for the statement-act sense but not for the statement-object sense.

Moreover, Austin's failure to take into account the structural ambiguity of the foregoing term has had important consequences for certain other aspects of his theory of language. This becomes evident when one looks at the claim that since statements are speech acts, and since statements can be true or false, it is that which is true or false which qualifies as a speech act. The rejoinder to this view is that this inference tends to be somewhat suspect in that it involves

a fallacy of ambiguity. Statement-acts are speech acts whereas statement-objects (including propositions) are what can be true or false. It therefore seems evident that Austin's act of stating which contains true/false connotations is one of the most serious weaknesses of his theory of truth.

Further elaboration of this distinction between statement-acts and statement-objects is given in terms of the difference between the propositional content of an utterance and its illocutionary force. The end product of this elaboration can be schematized in the following manner:

the statement-act = the act of stating;
= the act of stating a proposition;
= the act of expressing a proposition with a constative ("statemental") illocutionary force;
= the act of making a statement-object.

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the statement-object = what is stated (construed as stated);
= the proposition (construed as stated).

Consequently, propositions, but not acts can be true or false and, therefore, statement-objects rather than statement-acts are subject to truth claims. In the characterization of statement-object, the phrase "construed as stated" is added because that which is stated, i.e. the proposition, can also be the content of a question, of a promise, the antecedent of a hypothetical, and so forth. The statement-object is neutral as to the illocutionary force with which it is expressed, but statements are not neutral as to illocutionary

force, so "statement" in its object sense is not synonymous with "proposition," but only with proposition construed as stated.

To sum up this particular point, statement-acts are illocutionary acts of stating. Statement-objects are propositions (construed as stated). The latter but not the former can be true or false. In analyzing this distinction, it is evident that the confusion between the two ways of analyzing the term which prevented Austin from seeing both that statements can be speech acts and that statements can be true or false, although statement-acts cannot have truth values.

The outcome of the foregoing analysis leaves us with the following:

Phonetic Acts

Phatic Acts

Propositional Acts (replacing Rhetic Acts)

Illocutionary Acts

Perlocutionary Acts (from Searle, 1968, pp. 405-424).

Language Viewed as a Rule-Governed Form of Behavior

In his discussion concerning the notion of "rules for the use of linguistic elements," Searle (1969) makes the following point:

> I have said that the hypothesis of this book is that speaking a language is performing acts according to rules. The form this hypothesis will take is that the semantic structures of a language may be regarded as a conventional realization of a series of sets of underlying constitutive rules, and that speech acts are acts characteristically performed by uttering expressions in accordance with these rules. (pp. 36-37)

To recapitulate what has already been stated, in any speech situation there is a speaker, a hearer or hearers, and the speaker's

utterance. In the course of making noises the speaker will perform certain acts which may be called acts of referring. Conversely, the speaker may perform acts which include making statements, asking questions, issuing commands, giving reports, greetings, and warnings. The members of this latter group are called illocutionary acts. Now some of the verbs (or verb phrases) associated with illocutionary acts are—state, assess, describe, warn, remark, comment, command, order, request, criticize, apologize, welcome, promise, express approval, and express disgust.

It has generally been considered by many that the symbol word or sentence is the basic unit of linguistic communication; however there are those who now view the basic unit to be the production of a sentence taken in the performance of a speech act which constitutes, under certain conditions, an illocutionary act. It is this illocutionary act which some consider to be the minimal unit of linguistic communication. Therefore, if to perform illocutionary acts is to engage in a rule-governed form of behaviour (as, for example, the moving of a piece in chess is considered rule-governed) then it should be possible to state a set of necessary and sufficient conditions for the performance of a particular kind of illocutionary act. Moreover, this, in turn, should lead to a set of semantical rules for the use of that expression:

> If meaning is a matter of rules of use, surely we ought to be able to state the rules for the use of expressions in a way which would explicate the meaning of those expressions. (Searle, 1965, p. 223)

Searle distinguishes two major sorts of rules:

1. Regulative rules—rules which antecedently regulate

existing forms of behaviour—e.g. rules of etiquette regulate interpersonal relationships (but note that these relationships exist independently of the rules of etiquette);

2. Constitutive rules—(these also regulate) rules which create or define new forms of behaviour—e.g. rules of football both regulate and define the activity of playing football (but note that football has no existence apart from the rules).

Consequently, regulative rules regulate a pre-existing activity, an activity whose existence is logically independent of the rules. Constitutive rules constitute (and also regulate) an activity the existence of which is logically dependent on the rules.[1]

The premise which underlies this position is that the semantics of a language can be viewed as a series of systems of constitutive rules and that illocutionary acts are acts performed in accordance with these sets of constitutive rules. According to this view, then, the effort to state the rules for an illocutionary act can also be regarded as a kind of a test of the hypothesis that there are constitutive rules underlying speech acts.

A number of philosophers have taken exception to the position put forward by Searle. Alston (1970), Holbrow (1972), TyPak (1974), and O'Neill (1972) represent major disagreements with the notion that "speaking a language is engaging in a rule-governed form of behaviour." In terms of clarity, Alston and Holbrow present the most cogent viewpoints against Searle's position.

Alston's disclaimer with respect to Searle's notion of "rules"

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[1]See J. Rawls, "Two Concepts of Rules," Philosophical Review, 1955, pp. 29-45 and J. R. Searle's "How to Derive 'Ought' from 'Is,'" Philosophical Review, 1964, pp. 43-58.

is that it presents a two-level picture of language production. Consequently, the rules of a particular language or languages do not apparently enter into the production of illocutionary acts (i.e., "enter into their constitution"). Rather, there seem to be some sort of "underlying rules" which are constitutive of illocutionary and propositional acts. Searle (1969) stresses this point when he says:

> When I say that speaking a language is engaging in a rule-governed form of behaviour, I am not especially concerned with the particular conventions one invokes in speaking this language or that . . . but the underlying rules which the conventions manifest or realize . . . (p. 41)

The upshot of this two-level structure is that it does not provide us with any illustrative examples whereby we may obtain a clear picture of the basic characteristics of these constitutive rules. What Searle does provide us with are "rules" that govern linguistic elements in a particular language; he does not seem to have provided us with examples of "underlying rules." Alston (1970) further draws our attention to the fact that Searle's (1969) "set of semantic rules for the use of linguistic devices which mark the utterances as speech acts of those kinds" (p. 22), are in actuality, forms for rules or "rule functions" which become rules only when some particular expression in some particular language is substituted for the variable "Pr." Alston argues that there is no basis to the claim made by Searle that there is a kind of rule (Alston's emphasis) involved in promising that is "language—neutral and that then gets 'realized' in more superficial rules for particular expressions in particular languages" (Alston, 1970, p. 179). From Alston's point of view, the only kind of rule involved is the kind that governs

particular expressions.[1]

A further point regarding the distinction between regulative and constitutive rules has to do with supporting the distinction between linguistic conventions and underlying rules. Regulative rules function to "regulate antecedently or independently existing forms of behaviour," while constitutive rules do not merely regulate, "they create or define new forms of behaviour" (Searle, 1970, p. 33). The criticism of this view as being sufficient to explain the underlying rules "notion" runs as follows:

> On Searle's own showing it is rules of the kind he exemplifies that are constitutive of illocutionary acts. But, as we have seen, these rules are "particular linguistic conventions"; and hence they also regulate (logically) independent forms of behaviour, viz. utterances of sentences. Of course it is not any particular rule of this sort that is constitutive of the illocutionary act of promising but rather the fact that there are some particular rules or other that have this form. But then again that gives us no basis for supposing that it is a different kind of rule that is constitutive of illocutionary acts. (Alston, 1970, p. 179)

Perhaps it is this confusion between the notion of regulative and constitutive which tends to weaken Searle's central thesis considerably. In this respect I think it requires some further discussion.

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[1] The "underlying rules" notion that Searle alludes to may be compared to Chomsky's (1965) notion of "deep structure" in which "transformational rules" rearrange or transform phrase markers into other phrase markers by moving elements around, by adding elements, and by deleting elements. Perhaps Searle is attempting to rationalize transformational generative linguistics within the framework of his definition of "speech acts" (see J. R. Searle, "Chomsky's Revolution in Linguistics," The New York Review, June 29, 1972, pp. 16-24).

Searle, in his initial comments on language as a rule-governed form of behaviour, attempts to clarify the distinction between regulative and constitutive rules. In his view, constitutive rules are regarded as being creative in that they "create or define new forms of behaviour." Regulative rules, on the other hand, merely regulate antecedently or independently existing practices. Speech acts are regarded as being governed by constitutive rules for the following reason:

> . . . the semantic structure of a language may be regarded as the conventional realization of a series of sets of constitutive rules, and . . . speech acts are acts characteristically performed by uttering expressions in accordance with these sets of constitutive rules. (Searle, 1969, p. 37)

Constitutive rules are often cast in the form of indicative statements which can be viewed as being analytic in nature. However, regulative rules are basically imperative in form. Consequently, "the rules for checkmate or touchdown must 'define' checkmate in chess or a touchdown in American football in the same way that the rules of football define 'football'" (Searle, 1969, p. 34). Such an analogy has serious shortcomings in that Searle fails to distinguish between a definition which determines what counts as a checkmate in chess or a touchdown in football, and the further provisions which indicate the role these notions play in a game situation (i.e., that to achieve a checkmate is to win a game of chess, or that to score a touchdown is to earn six points in a game of American or Canadian football). Hence, a definition of the kind espoused by Searle "can appear now as a rule" only if one takes it as specifying the goal-state which a provision of the second type has characterized as such.

The definition itself is in no sense a rule, but it can be regarded as part of the rule determining what counts as winning because it specifies what so counts, but without saying that it so counts (Holbrow, 1972, p. 459). If we then look at the way in which the rules of football define "football" it is apparent how the simple comparison with the definitions of technical terms within the game can lead us astray. Searle himself admits that any definition of "football" must include more than the rules laying down the ends and constraints. Nevertheless the appeal of the view that football can be defined in terms of the observance of precise rules analogous to those determining what counts as a touchdown must depend on regarding its rules as having analogous precision. The ends-and-constraints rules approach this degree of precision, but the additional provisions are not clearly given in the same manner.

It thus seems clear that a considerable number of types of conditions or provisions need to be mentioned in any analysis of games. Moreover, no one term is capable of covering all these types. Perhaps the most useful way of preserving Searle's thesis would be to confine the term "constitutive rule" to the "ends-and-constraints" type of provision, for it was at this level that precise rules seemed to be operating in accordance with the way in which the participants were trying to act. Moreover, it is also with respect to these that the claim that new forms of behaviour were created had an intuitive appeal.

In what sense, then, are there constitutive rules which are essential to illocutionary acts? On the one hand, Searle feels that

certain simple illocutionary acts can be performed just "by getting one's audience to recognize certain of one's intentions in behaving in a certain way" (p. 38). On the other hand, "illocutionary acts are performed within language in virtue of certain rules, and indeed could not be performed unless language allowed the possibility of their performance" (ibid.). It is this view of language as being rule-governed which has great merit. The merit lies in the fact that if it is true that the illocutionary acts which are performed by means of language can only be accounted for in terms of rules invoked by the speaker and understood by the hearer, there can still be an essentially different viewpoint from that espoused by the stimulus-response theories of language. Moreover, it seems apparent that Searle's account of meaning and understanding provides a basis for claiming that stimulus-response theories as such are not as adequate as explanatory models of accounts of the kind espoused by Searle.

In summing up what Searle has said concerning games and speaking a language, Holbrow (1972) claims that Searle's treatment of the former displays an analogous desire to treat all that was involved in playing a game as if it were a matter of the observance of precisely formulated (or perhaps formulable) rules (p. 467). Such a view seems inadequate in that speech acts, if anything, are more rigorously governed than games.

Propositions

Searle states that whenever two illocutionary acts contain the same reference and predication, provided that the meaning of the referring expression is the same, then the same proposition

is expressed. Consider uttering one of the following sentences:

(1) Will Socrates leave the room?

(2) Socrates will leave the room!

(3) Socrates, leave the room!

(4) Would that Socrates left the room.

(5) If Socrates will leave the room, I will leave also.

Utterances of each of the above sentences on a given occasion would involve performances of different illocutionary acts. The first utterance would be a question, the second an assertion about the future (i.e., a prediction), the third a request or order, the fourth an expression of a wish, and the fifth a hypothetical expression of intention. Nevertheless, in the performance of each utterance the speaker would characteristically perform some subsidiary acts which are an integral aspect of all five illocutionary acts. In each utterance the speaker refers to a particular person Socrates and predicates the act of leaving the room of that person. In each of the foregoing cases, even though the illocutionary acts are different, at least some of the non-illocutionary acts of reference and predication are the same.

The reference to some one person (Socrates) and predication of the same thing of him in each of the foregoing illocutionary acts implies a common content in each of them. Searle calls this common content a proposition and in the utterance of each of (1)-(5) the speaker expresses the proposition that Socrates will leave the room. It is important to note here that Searle does not say that the sentence

expresses the proposition. He does say, however, that in the utterance of the sentence the speaker expresses the proposition. It is also important to note that Searle distinguishes between a proposition and an assertion or statement of that proposition. The proposition that Socrates will leave the room is expressed in the utterances (1)-(5) but it is only in (2) that the proposition is asserted. Searle claims that an assertion is an illocutionary act, but that a proposition is not an act at all, although the act of expressing a proposition is a part of performing certain illocutionary acts.

Essentially Searle distinguishes between the illocutionary act and the propositional content of the illocutionary act. However, not all illocutionary acts have a propositional content as in "Gadzooks!" or "Wow!".

From the point of view of semantics, it is possible to distinguish between the propositional indicator in a sentence and the indicator of illocutionary force. In other words, for a large class of sentences used to perform illocutionary acts, it is possible that the sentence has two (not necessarily separate) parts, the proposition indicating element and the function indicating device. Evidently, the function indicating device shows how the proposition is to be taken, or, what illocutionary force the utterance is to have, that is, what illocutionary act the speaker is performing in the utterance of the sentence. In the English language, function indicating devices include word order, stress, intonation contour, punctuation, the mood of the verb, and a set of so-called performative verbs. For example, it is possible to indicate the kind of

illocutionary act one is performing by beginning the sentence with "I regret," "I claim," etc. In actual speech situations, the context in which the utterance is made will make it clear what the illocutionary force of the utterance is, without having to involve the relevant function indicating device.

It is also possible that this semantical distinction may have some syntactical analogue, especially in light of recent developments in transformational grammar. For example, in the underlying phrase marker of a sentence there is a distinction between those elements which correspond to the function indicating device and those which correspond to the propositional content. Consider the following sentence:

"I promise to come."

If we study the deep structure of this sentence, we find that its underlying phrase marker contains

"I promise + I will come."

This distinction between illocutionary force indicators and proposition indicators provides a very useful means whereby one can analyse illocutionary acts. Since the same proposition can be common to different kinds of illocutionary acts, it is possible to separate the analysis of the proposition from the analysis of kinds of illocutionary acts. There are rules for expressing propositions, rules for such things as reference and predication. However, Searle concentrates at this point on the rules for illocutionary force indicating which he symbolizes in the following manner:

F(p)

where the variable "F" takes illocutionary force indicating devices as values and "p" takes expressions for propositions. Searle then goes on to divide up illocutionary acts into the elements represented by the letters in the notation

"F(RP)"

This form of notation then makes it possible to offer separate analyses of force (F), referring (R) and predicating (P).

The problem in dealing with the notion of predication seems to lie in specifying what it is that one is doing whenever one makes the same predication. "Predicate" is obviously being used in a special sense as we see in the following formulation:

> To predicate an expression 'P' of an object 'R' is to raise the question of the truth of the predicate expression of the object referred to. (Searle, 1969, p. 124)

The term 'P' has to be interpreted in that sense in which one is raising the question of whether 'R' is 'P' in all the examples we gave initially, and in other cases as well. A task of this nature seems to be akin to "getting out in the open the idea of R's being P," "putting before the mind of one's hearer the possibility of R's being P." The basic criticism of this notion of predication is that such a view is in reality too metaphorical to be clear conceptually (see Alston, 1970).

Meaning

What, asks Searle, is the difference between <u>just</u> uttering sounds or making noises and performing a speech act? One important difference has to do with the fact that the sounds (or marks) one

makes in the performance of a speech act (or reading act) are characteristically said to have meaning. Secondly, one is basically said to mean something by those sounds (or marks). Ostensibly, when one speaks, one means something by what one says, and what one says; that is, the string of morphemes that one emits is evidently said to have meaning. It is at this point that the analogy between performing speech acts and playing games breaks down. The pieces in a game like chess are not characteristically said to have meaning. Furthermore, when one makes a move in chess one is not inveterately said to mean anything by that move.

In developing his theory of meaning, Searle borrows from and revises Grice's (1957) theory of meaning. The Gricean analysis of one sense of the notion of "meaning" runs as follows:

> To say that A meant something by X is to say that A intended the utterance of x to produce some effect in an audience by means of recognition of this intention. (Grice, 1957, p. 385)

The foregoing definition is useful in that it shows the close relationship between the notion of meaning and intention, and because in speaking a language one attempts to communicate things to the listener by means of getting him to recognize the speaker's intention to communicate just those things. Searle provides us with the example of the speaker who attempts to get his listener to believe that he is French by speaking French all the time, dressing in a French manner, showing wild enthusiasm for de Gaulle, and cultivating French acquaintances. On the other hand, one might attempt to get his listener to believe that he is French simply by telling him that he is French. Both cases are, in Searle's view, defective. They are

faulty because they fail to distinguish the different kinds of effects—perlocutionary versus illocutionary—that one may intend to produce in one's hearers. Furthermore, the original Gricean notion of meaning fails to show the way in which these different kinds of effects are related to the notion of meaning. Another weakness with the Gricean theory is that it fails to account for the extent to which meaning is a matter of rules or conventions. In other words, the Gricean account of meaning does not show the connection between one's meaning something by what one says and what that which one says actually means in the language.

To illustrate this point Searle presents the example of the American soldier in the Second World War who is captured by Italian troops. In order to get the Italian troops to believe that he is really a German soldier, the soldier proposes to repeat a phrase in German in the hopes that the Italians will think that he is a German soldier and will release him. The point of the counter-example is to illustrate the connection between what a speaker means and what the words he utters mean. Searle further illustrates this point with a quote from Wittgenstein's (1953) Philosophical Investigations where he says "Say 'it's cold here' and mean 'it's warm here'" (paragraph 510). The reason we are unable to do this, says Searle, is that what we can mean is a function of what we are saying. Meaning is more than a matter of intention, it is also a matter of convention.

The upshot of Searle's discussion is a reformulation of Grice's account of meaning in an attempt to make it clear that one's meaning something when one utters a sentence is more than just randomly

related to what the sentence means in the language one is speaking. Searle's purpose in his analysis of illocutionary acts is to capture both the intentional and conventional aspects and especially the relationship between them. We will, however, postpone further discussion of this notion of meaning to a later chapter where we attempt to deal with the question of reading comprehension and meaning.

An Analysis of the Illocutionary Act of "Promising"

As a preliminary to this analysis, Searle asks what conditions are necessary and sufficient for the act of promising to have been performed in the utterance of a given sentence. He then proceeds to attempt an answer to this question by stating these conditions as a set of propositions such that "the conjunction of the members of the set entails the proposition that a speaker made a promise, and the proposition that the speaker made a promise entails this conjunction" (Searle, 1965, p. 231). Therefore, each condition will be a necessary condition for the performance of the act of promising, and taken collectively the set of conditions will be a sufficient condition for the act to have been performed (ibid., p. 231).

The reasoning behind such a maneuver is that if we are able to come up with such a set of conditions then it should be possible to extract from them a set of rules for the use of the function indicating device. Such a method is said to be analogous to discovering the rules of chess by asking oneself what are the necessary and sufficient conditions under which one can be said to have correctly moved a knight or castled or checkmated a player, etc. In keeping with this view, it is conceivable to think that we learned how to play

the game of illocutionary acts, but basically this was done without an elaborate formulation of the rules. Consequently the first stage in obtaining such a formulation is to set out the conditions for the performance of a particular illocutionary act. The purpose of such an inquiry is to offer a partial explication of the set of conditions for the performance of a particular illocutionary act and to lay the groundwork for the formulation of the rules.

In the presentation of the conditions we must first consider the case of a sincere promise and then show how to modify the conditions to allow for insincere promises. As Searle's inquiry is semantical rather than syntactical, he simply assumes the existence of grammatically well-formed sentences.

The analysis takes the following format:

Given that a speaker S utters a sentence T in the presence of a hearer H, then in the utterance of T, S sincerely (and non-defectively) promises that p to H if and only if:[1]

(1) Normal input and output conditions obtain.

(2) S expresses the proposition that p in the utterance of T.

(3) In expressing that p, S predicates a future act A of S.

(4) H would prefer S's doing A to his not doing A, and S believes H would prefer his doing A to his not doing A.

(5) It is not obvious to both S and H that S will do A in the normal course of events.

(6) S intends to do A.

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[1]Here S = the speaker, H = the hearer, T = a sentence, that p = the proposition.

(7) S intends that the utterance of T will place him under an obligation to do A.

(8) S intends (i-1) to produce in H the knowledge (K) that the utterance of T is to count as placing S under an obligation to do A. S intends to produce K by means of the recognition of (i-1), and he intends (i-1) to be recognised in virtue of (by means of) H's knowledge of the meaning of T.

(9) The semantic rules of the dialect spoken by S and H are such that T is correctly and sincerely uttered if and only if conditions (1)-(8) obtain.

As condition (9) makes clear, we can then move to formulate a rule to the effect that T is to be uttered only if conditions (1)-(8) obtain, and T's having the literal meaning it has will consist in its being subject to that rule. Alston (1970) draws our attention to the fact that conditions (2) and (3) isolate the "proposition expressing" aspect of promising, while conditions (4)-(8) are designed to bring out various necessary conditions for the "illocutionary force indicating" aspect of promising. Hence the analysis points us in the direction to a separate analysis of the subsidiary acts out of which the total illocutionary is made: reference, predication and illocutionary force indication. Furthermore we have the formulation of sets of semantic rules governing sentence-components used to perform these subsidiary acts. Searle provides us with an example in the following set of semantic rules for the use of "any illocutionary force indicating device Pr for promising":

Rule 1 - Pr is to be uttered only in the context of a sentence (or larger stretch of discourse) T, the utterance of which predicates some future act A of the speaker S.

Rule 2 - Pr is to be uttered only if the hearer H would prefer S's doing A to his not doing A, and S believes H would prefer S's doing A to his not doing A.

Rule 3 - Pr is to be uttered only if it is not obvious to both H and S that S will do A in the normal course of events.

Rule 4 - Pr is to be uttered only if S intends to do A.

Rule 5 - The utterance of Pr counts as the undertaking of an obligation to do A. (Searle, 1969, pp. 62-63)

Rule 1 above attempts to insure that Pr is imbedded in the right kind of sentential context, involving the expression of the right kind of proposition. The subsequent rules state the remaining conditions for promising as conditions on the utterance of Pr (promising). In his review of these rules, Alston attempts to point out some discrepancies between the two analyses offered by Searle. His (Alston's) objections run as follows:

> From the formulation of grand strategy one would expect Searle to make the rules for Pr require, as necessary conditions of its utterance, all conditions (1)-(8) from the analysis of promising . . . in fact conditions (1) and (8) are not reflected in any way in the rules governing Pr, while (7) is reflected in a different form, i.e., as the rule that the utterance of Pr does count as the undertaking of an obligation to do A, rather than as a requirement that Pr be uttered only if (7) obtains, i.e. only if S intends that the utterance will place him under an obligation to do A. (Alston, 1970, p. 175)

It is important to note that the formulation of rules for referring expressions and predicates cannot be "read off" the analysis of promising in the same way, owing to the fact that the notions of reference and predication appear in that analysis in an unanalysed form. Searle does this deliberately in order to treat reference

and predication in greater detail in ensuing chapters.

In fact, in the chapter dealing with reference, Searle goes to great lengths to integrate his conception of reference into the framework of speech acts. Such integration seems appropriate when we consider that referring is one of the things one does in speaking, and when one performs an illocutionary act that "has to do" with some particular individual, referring is an essential part of the performance of the total illocutionary act in question.

The essential aspect of this account of reference is the "principle of identification," which runs as follows:

> A necessary condition for the successful performance of a definite reference in the utterance of an expression is that either the expression must be an identifying description or the speaker must be able to produce an identifying description on demand. (Searle, 1969, p. 88)

Searle concludes his analysis of the speech act of promising by stating that if the analysis is of any general interest beyond the case of promising then it would seem that these distinctions should carry over into other types of speech acts. He illustrates this claim by providing examples using giving an order, making assertions, and giving greetings.

There is also the suggestion that further research is warranted to carry out analysis of other types of speech acts. Such an analysis would extend our understanding of the subject of speech acts and would provide a basis for a more serious taxonomy than "any of the usual facile categories such as evaluative versus descriptive, or cognitive versus emotive."

III. SUMMARY

The major tenets of Searle's Speech Acts: An Essay in the Philosophy of Language can be summed up as constituting the following:

> a pattern of analysis for illocutionary acts, and for the 'subsidiary acts' of referring and predicating, together with associated accounts of what it is for certain kinds of linguistic expression to mean what they do, and of what it is for a speaker to mean something by what he says. (Alston, 1970, p. 172)

Searle, in adapting and developing Austin's original formulations along with the more recent work of Grice (1957, 1969), Rawls (1972) and others, has produced a general theory summarized in what he terms the "main hypothesis" of the book that,

> speaking a language is engaging in a rule-governed form of behaviour. (Searle, 1969, p. 12)

The foregoing notions ostensibly form the central issue or issues to which Searle is speaking. This central portion is characterized by methodological remarks on the character of, and tests appropriate to, the positions put forward in the book. A second part is devoted to an exegesis on three alleged fallacies often perpetrated by analytical philosophers.[1] Searle ties this part of the book in with his theory (part one) by claiming that the foregoing fallacies stem, in part, from faulty conceptions of illocutionary acts and their relation to meaning.

The study of speech acts is important in that such a study is the most illuminating approach to the philosophy of language in general, to the provision of "philosophically illuminating descriptions

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[1] See J. R. Searle, Speech Acts: An Essay in the Philosophy of Language, Cambridge: Cambridge University Press, 1969, especially Part Two: Some Applications of the Theory.

of certain general features of language, such as reference, truth, meaning and necessity" (Searle, 1969, p. 4). Thus Searle draws some justification for his "principle of expressibility," a principle which lays down the premise that "whatever can be meant can be said."

Consequently, a study of the meaning of sentences is not in principle distinct from a study of speech acts. In pursuing this outlook, Searle undertakes an explication of what is involved in performing an illocutionary act and, in so doing, what is involved in performing such subsidiary "propositional" acts as referring and predicating. In the process of disclosing what is involved in the performance of any such act, such disclosure will involve bringing out what it is for a suitable linguistic expression to be correctly used to perform that act. In addition, it will amount to bringing out what it is for that expression to have the meaning it has.

In sum, Searle's concept of speech acts represents the logical extension of Austin's original work in this area. The general theory of speech acts represents the attempt to "graft the study of syntax on to the study of speech acts." That such an operation is important is predicated upon the essential connection between language and communication, between meaning and speech acts. This essential connection will be discussed in greater detail in the following chapter when we discuss the relationship of theories of meaning to reading comprehension.

CHAPTER IV

COMPREHENSION AND MEANING IN READING

I. INTRODUCTION

In picking up the thread of discourse concerning ordinary language philosophy and the place that a general theory of speech acts has within that particular context, it is very evident that the central concern of many philosophers is with questions of meaning and how meaning arises in the course of language use. Traditionally, philosophy of language has concerned itself with the following sorts of questions: What, if anything, is meaning? Are there meanings? What is it for something to be meaningful? What is the relation between meaning and reference?

Linguists and psychologists have also been quite interested with questions as to how one uses spoken language to communicate one's meanings. And despite some apparent differences with respect to viewpoints regarding language, there is a great deal of commonality with respect to questions being raised by all disciplines concerned with language and the place that a theory of meaning has within the context of a theory of language use.

Linguistics, in the main, has concerned itself with the scientific study of language and languages. Philosophical psychology, too, is concerned with the scientific study of language but it is more particularly that branch of philosophical psychology known as logic which has occupied the interests of philosophers for hundreds of years.

In fine, it appears that current philosophical debate is fixed upon certain fundamental aspects of meaning. Analyticity, for example, deals with those issues concerning the possibility of purely linguistic truth. Reference has to do specifically with the positive relation of "reference" whereby a word comes to stand for a name or an object. Propositions cover the philosophical domain that lies simultaneously on the "boundaries between, on the one hand, philosophy of language and logic and, on the other, philosophy of language and philosophy of mind."

Methodology, within the framework of philosophy of language, attempts to explore the scope and limits of the scientific study of language (i.e., philosophy of linguistics). Theories of meaning attempt to develop accounts of meaning in the style of classical philosophy—response either to a priori considerations or to traditional conceptions of empirical method.

Semantics, as a theory of meaning, can be conceptualized as a "descriptively and explanatorily adequate account of human semantic recognition competencies." This area of study visualizes an account of the semantic categories not as autonomous, but rather as encompassed within the semantic component of a general empirical theory of language.

Speech acts, as a major theoretical component within the philosophy of language, intersects with general theories of human action.[1] Moreover, it is within this theoretical viewpoint, that the

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[1]For a description of narrative discourse from the perspective of a general theory of action see, T. V. van Dijk, "Action, action description, and narrative," New Literary History, Vol. VI, No. 2, Winter 1975, 273-294.

groundwork may be laid for a general theory of reading acts.

Theories of reading comprehension, on the other hand, have in the course of their development drawn from a number of related disciplines, but only recently from the field of ordinary language philosophy. Theory building in the development of explanatory schemas (or models) of the reading process have been drawn from such related research fields as medicine, including physiology and neurology, psychology and, in recent times, linguistics, psycholinguistics, and information processing theory.

The concern with the elucidation of meaning as the crucial variable in the decoding process has been of utmost concern to those dealing with substantive issues in the field of reading research. It seems, therefore, that a careful explication of a number of basic philosophical viewpoints regarding language and language use will prove helpful in examining subsequent theories of reading comprehension. Two basic areas which appear to be germane to this area are semantics and speech acts as they relate to the overall notion of philosophical meaning. Consequently these two basic philosophical notions will be examined as they apply to an analysis of current theories of reading comprehension.

II. SEMANTICS

Current work being carried on within this field consists of a theory or theories of the meaning of words, phrases and sentences in human language. In this respect, semantics is compared with syntax. Traditionally, the central category of syntax has to do with well-formed

or grammatical utterances. By way of contrast, semantics has come to be regarded as having as its basic category, that of a significant or meaningful utterance.

Basically, the primary goal of semantics seems to be to describe (adequately) what words in languages mean, or may mean, when they are synonymous, ambiguous and so on. On this account, semantics is contrasted with theories of meaning whose primary goal has to do with providing necessary and sufficient conditions for meaningfulness, adequacy of accounts of meaning, etc. Rosenberg and Travis (1971) argue that it is from such "statements of condition" that adequate semantic theories follow.

In viewing semantics, two different kinds of theories may be distinguished: universal and particular. A universal semantic theory would be a theory of meanings for human language in general. A particular semantic theory applies to a single language and would specify the meanings of all the well-formed expressions of that language.

Katz and Fodor (1963) regard semantics as an interpretive theory of sentences; a theory which attaches extra information to each description of a particular syntax. Such a view differs markedly from the traditional view of semantics in linguistics and needs to be discussed more adequately than this brief account can offer in the space of a few lines.

Leech (1974) provides a general overview of the whole field of semantics. In so doing, he gives some historical background to the development of this discipline and attempts to bridge the gap

between past theories of semantics with current notions of language development as espoused by Chomsky (1957, 1965) and his followers. One of the informative aspects of Leech's book has to do with the delineation of types of meaning. Leech categorizes these under seven broad domains (see Figure 1). The first of these, conceptual meaning, has to do with logical, cognitive, or denotative meaning. This particular domain of meaning occupies a large part of the discussion in his book in that Leech feels that this sense of meaning is of central importance to the development of a fuller understanding of semantic theory.

Conceptual meaning (Leech also refers to it as 'denotative' or 'cognitive' meaning) is ostensibly assumed to be a central factor in linguistic communication. Conceptual meaning seems to possess a complex and sophisticated organization which is comparable to the kind of organization one sees on the syntactic and phonological levels of language. As examples, Leech (1974) draws our attention to two structural principles which seem to be at the focal point of all linguistic patterning. The first principle, that of contrastiveness, is exhibited in contrastive features which underlie the classification of sounds in phonology (e.g., any label we apply to a sound defines it positively, by what features it possesses, and also by implication negatively, by what features it does not possess). In a similar fashion, the conceptual meanings of a language seem to be organized basically in terms of contrastive features (e.g., the meaning of the word woman could be specified as +HUMAN, -MALE, +ADULT, etc.).

The second principle, that of constituent structure, is the

1. CONCEPTUAL MEANING or *Sense*		Logical, cognitive, or denotative content.
ASSOCIATIVE MEANING	2. CONNOTATIVE MEANING	What is communicated by virtue of what language refers to.
	3. STYLISTIC MEANING	What is communicated of the social circumstances of language use.
	4. AFFECTIVE MEANING	What is communicated of the feelings and attitudes of the speaker/writer.
	5. REFLECTED MEANING	What is communicated through association with another sense of the same expression.
	6. COLLOCATIVE MEANING	What is communicated through association with words which tend to occur in the environment of another word.
7. THEMATIC MEANING		What is communicated by the way in which the message is organized in terms of order and emphasis.

Figure 1

Seven Types of Meaning
(From Leech, 1974, p. 26)

principle by which larger linguistic units are built up out of smaller units. From a linguistic perspective, it is possible to analyse a sentence syntactically into its constituent parts, moving from its immediate constituents through a hierarchy of sub-division to its ultimate constituents or smallest syntactic elements. Leech (1974) utilizes a tree-diagram to illustrate this principle:

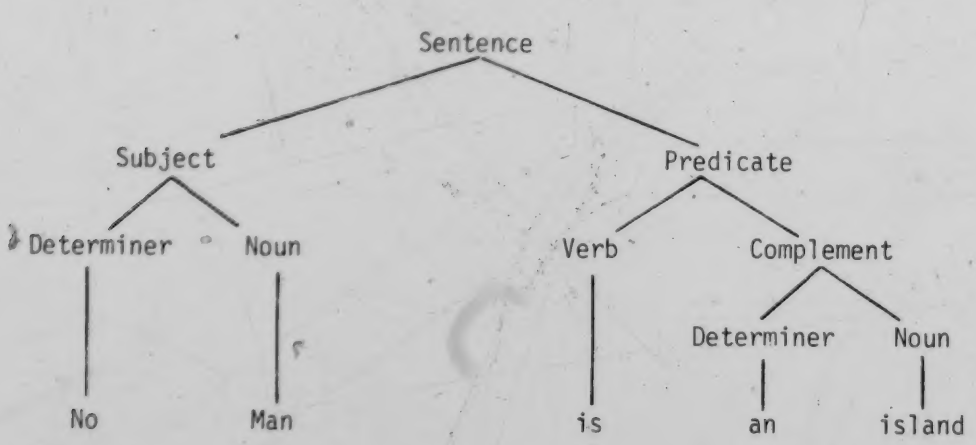

Figure 2

Tree-diagram to Illustrate the Principle of Constituent Structure
(from Leech, 1974, p. 12)

The foregoing principle can also be represented by bracketing:

$$\{(\text{No})\ \ (\text{man})\}\ \{[(\text{is})]\ \ [(\text{an})\ \ (\text{island})]\}$$

Figure 3

"Bracketing" to Illustrate the Principle of Constituent Structure
(from Leech, 1974, p. 12)

The two principles of contrastiveness and constituent structure represent the way language is organized on what linguists have termed the PARADIGMATIC (or selectional) and SYNTAGMATIC (or combinatory) axes of linguistic structure. Leech devotes a considerable portion of his book (Chapters 6-14) to explore the application of these principles to semantic analysis.

A third principle of linguistic organization is introduced which Leech feels is relevant to conceptual meaning. This principle states that any given piece of language is structured simultaneously on more than one 'level.' Leech illustrates this principle in the following manner:

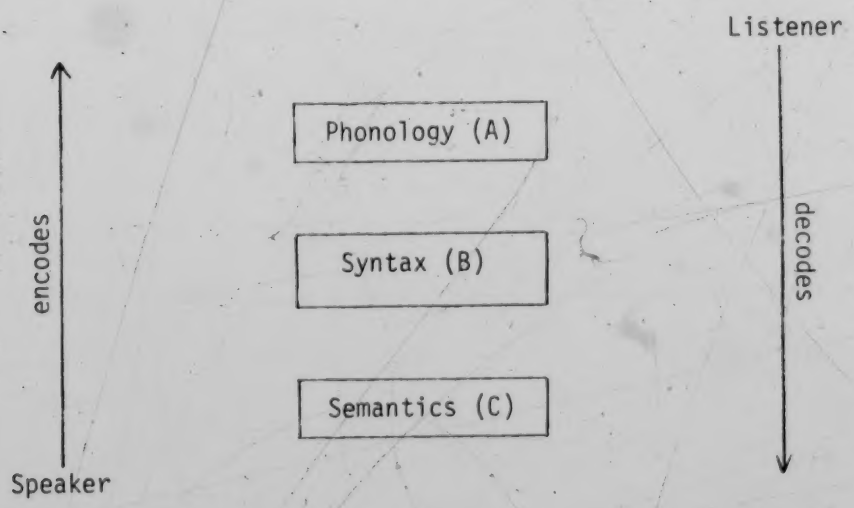

Figure 4

Diagram Illustrating Simultaneous 'Structuring' of Linguistic Utterances on 'Levels' (from Leech, 1974, p. 13)

The foregoing diagram illustrates the fact that for the analysis of any sentence there is a need to establish a "phonological

representation," a "syntactic representation" and a "semantic representation," and the stages by which one level of representation can be derived from another (Leech, 1974, p. 13). Thus the aim of conceptual semantics seems to be to provide, for any given interpretation of a sentence, a configuration of abstract principles which is its "semantic representation," and which illustrates precisely what we need to know in order to "distinguish that meaning from all other possible sentence meanings in the language, and to match that meaning with the right syntactic and phonological expression" (Leech, ibid., p. 13). From Leech's perspective, conceptual meaning is inextricably bound up with what language is, and in such a fashion that one can scarcely define language without making reference to it.

Leech does make reference to the other kinds of meaning (see Figure 2). However, since conceptual meaning seems to be that kind of meaning which is most pertinent to our discussion, we will forego further discussion of these alternate kinds of meaning. For a more elaborate discussion of semantics, see Geoffrey Leech's, Semantics (1974), A. Korzybski, Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics (1958), and Danny D. Steinberg's and Leon A. Jacobovits' Semantics: An Interdisciplinary Reader in Philosophy, Linguistics and Psychology (1971). For the moment, we will rest our case on semantics in the hope that a sufficient amount of groundwork has been laid to show the interrelationship of this field of study to that area which we shall examine in greater detail; namely, meaning in a philosophical sense of the term. To effect this, it will be necessary to focus discussion on

meaning as it is seen from a number of varying philosophical perspectives.

III. SPEECH ACTS: MEANING AS "USE"

Grice's Intentional/Causal Theory of Meaning

H. P. Grice's (1957) view of meaning as an intentional form of behavior has received considerable attention since the publication of his initial article in The Philosophical Review. Not a prolific publisher and writer, Grice has subsequently written "Utterer's meaning and intention" (1969) and "Logic and conversation" (in Peter Cole and Jerry L. Morgan, 1975). A number of critical reviews have subsequently appeared, including those by Paul Ziff (1967), J. R. Searle (1969), A. F. MacKay (1972), and Garner (1974). Specifically, since Searle (1969) utilizes Grice's theory in the elucidation of his own theory of meaning, the Gricean viewpoint will be analyzed using Searle as the major source of criticism and evaluation.

Grice provides the following analysis of the notion of "non-natural meaning"[1]: To say that a speaker S meant something by X is to say that S intended the utterance of X to produce some effect in a hearer H by means of the recognition of this intention. Searle generally agrees with this account primarily because he feels that the account makes a connection between meaning and intention. Secondly, Searle feels that Grice's theory evidently captures a number of essential features of linguistic communication. For

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[1]Grice distinguishes "meaning$_{nn}$" (i.e. "non-natural meaning") from such senses of "mean" as occur in "Clouds mean rain" and "those spots mean measles."

example, in a conversational setting the speaker attempts to communicate certain things to the hearer by getting him to recognize his (the speaker's) intention to communicate just those things. The intended effect is achieved by getting the hearer to recognize the speaker's intention to achieve that effect, and as soon as the hearer recognizes what the speaker's intention to achieve is, it is in general achieved.

Searle illustrates this point with a simple example. When, for example, the speaker says "Hello," the intention is to produce in the hearer the knowledge that he is being greeted. Hence, if the hearer recognizes that it is the speaker's intention to produce in him that knowledge, he thereby acquires that knowledge.

Having introduced the Gricean theory of meaning as a useful account of the connection between meaning and intention, Searle (1969) offers two basic criticisms of the theory. First of all, the theory fails because it does not account for the extent to which meaning can be a matter of rules or conventions. Grice's account of meaning, therefore, does not show the connection between one's meaning something by what one says, and what that which one says actually means in the language (p. 43). In the second place, by defining meaning in terms of intended effects, Grice's theory confuses illocutionary acts with perlocutionary acts. In effect, Grice defines meaning in terms of intending to perform a perlocutionary act, whereas, in Searle's view, saying something and meaning it is a matter of intending to perform an illocutionary, rather than a perlocutionary, act.

Searle illustrates his objections by presenting a counter-example to the Gricean analysis of meaning. An American soldier in

the Second World War is captured by Italian troops. He wishes to get the troops to believe that he is a German officer, in order to get them to release him. What he would like to do is to tell them in German or Italian that he is a German officer, but he does not know enough German or Italian to do that. So he "as it were, attempts to put on a show of telling them that he is a German officer" by reciting the only line of German that he knows, a line he learned at school: "Kennst du das Land, wo die Zitronen bluhen." He intends to produce a certain response in his captors, namely that they should believe him to be a German officer, and he intends to produce this response by means of their recognition of his intention to produce it.

Searle, however, maintains that it is false statement when the soldier says "Kennst du das land." What he really means is "I am a German officer" because what the words of the utterance mean is "Knowest thou the land where the lemon trees bloom." Searle uses this example to support the claim that something is missing from the Gricean account of meaning. In Grice's terminology, the soldier intends to produce a certain effect in the Italian captors, namely, the effect of believing that he, the American soldier, is a German soldier, and the captured soldier intends to produce this effect by means of their recognition of his intention. Searle doubts that such a conclusion is possible. Part of the reason for the impossibility of this is that what we can mean is at least sometimes a function of what we are saying. In other words, for Searle, meaning is more than a matter of intention; it is also at least sometimes a matter of convention. As a consequence, Searle concludes that, on Grice's

account, any sentence can be uttered with any meaning whatever, given that the circumstances make possible the appropriate intentions. However, such a view of meaning leads to the consequence that the meaning of a sentence then becomes just another circumstance.

Searle's Revised Account of Grice's Theory

Searle then attempts to reformulate the Gricean account of meaning in order to clarify the notion that one's meaning something when one utters a sentence is more than just randomly related to what the sentence means in the language one is speaking. Searle's position is as follows:

> In our analysis of illocutionary acts, we must capture both the intentional and conventional aspects and especially the relationship between them. In the performance of an illocutionary act in the literal utterance of a sentence, the speaker intends to produce a certain effect by means of getting the hearer to recognize his intention to produce that effect; and furthermore, if he is using words literally, he intends this recognition to be achieved in virtue of the fact that the rules for using the expression he utters associate the expression with the production of that effect. (Searle, 1969, p. 45)

Searle's further amendation to the Gricean view of meaning has to do with Grice's claim that saying something and meaning it is a matter of intending to perform a perlocutionary act. In fact, says Searle, saying something and meaning it is a matter of intending to perform an illocutionary act. In the first place, it could not be the case that in general intended effects of meant utterances were perlocutionary because many kinds of sentences used to perform illocutionary acts have no perlocutionary effect associated with their meaning (e.g., when I say "Hello" and mean it, there is no intention to produce or elicit any state or action other than the

knowledge that one is being greeted). And that knowledge is simply the hearer's understanding of what the speaker said, it is not an additional response or effect. In this respect, Brown's (1974) notion of entitlement with respect to illocutionary force serves to illustrate Searle's point. In a situation where the speaker attempts to get the joiner to become involved in a cause, the primary focus of the request is to let the joiner know the nature of your request (i.e., the listener is entitled "to know"). Whether the listener joins is subsequent to his knowing the nature of the request.

A second point made by Searle has to do with what he calls a "correlated perlocutionary effect." That is, the speaker may say something and mean it without in fact intending to produce that effect. I may, for example, make a statement without caring whether my audience believes it or not.

A third point has to do with belief. Searle claims that it is not in general the case that when one speaks to someone with the intent of, for example, telling him some item of information, that one intends that his reason or even one of his reasons for believing what one tells him should be that one intends him to believe it. It is not one of the reader's reasons for believing what the author says in his book that the author intends the reader to believe it.

Searle claims that it is in the case of illocutionary acts we succeed in doing what we are trying to do by getting our audience to recognize what we are trying to do. However, the "effect" on the hearer is not a belief or response; it consists in the hearer understanding the utterance of the speaker. Searle calls this "illocutionary

effect." Hence the way in which Grice's reflexive intention works is as follows: the speaker S intends to produce an illocutionary effect IE in the hearer H by means of getting H to recognize S's intention to produce IE.

Hence, the characteristic intended effect of meaning is understanding, but not necessarily the perlocutionary effect alluded to by Grice. Rather, in his analysis of illocutionary acts, Searle attempts to "cash in" that which constitutes understanding a literal utterance in exchange for some of the rules concerning the elements of the uttered sentence and the hearer's recognition of the sentence as being subject to those rules (p. 48).

In sum, on the hearer's side, understanding the speaker's utterance is closely connected with recognizing his intentions. In the case of literal utterances the bridge between the speaker's side and the hearer's side is provided by their language. Searle outlines this for us in the following manner.

1. Understanding a sentence is knowing its meaning.
2. The meaning of a sentence is determined by rules, and those rules specify both conditions of utterance of the sentence and also what the utterance counts as.
3. Uttering a sentence and meaning it is a matter of (a) intending (i-1) to get the hearer to know (recognize, be aware of) that certain states of affairs specified by certain of the rules obtain, (b) intending to get the hearer to know (recognize, be aware of) these things by means of getting him to recognize i-1 and (c) intending to get him to recognize i-1 in virtue of his knowledge of the rules for the sentence uttered.
4. The sentence then provides a conventional means of achieving the intention to produce a certain illocutionary effect in the hearer. If a speaker utters a sentence and means it he will have intentions (a), (b), and (c). The hearer's understanding the utterance will simply consist in those intentions being achieved. And the intentions

> will in general be achieved if the hearer understands the sentence, i.e. knows its means, i.e. knows the rules governing its elements. (Searle, 1969, p. 48)

Searle exemplifies these points with the simple utterance "Hello":

1. Understanding the sentence "Hello" is knowing its meaning.
2. The meaning of "Hello" is determined by semantic rules, which specify both its conditions of utterance and what the utterance counts as. The rules specify that under certain conditions an utterance of "Hello" counts as a greeting of the hearer by the speaker.
3. Uttering "Hello" and meaning it is a matter of (a) intending to get the hearer to recognize that he is being greeted, (b) intending to get him to recognize that he is being greeted by means of getting him to recognize one's intention to greet him, (c) intending to get him to recognize one's intention to greet him in virtue of his knowledge of the meaning of the sentence "Hello."
4. The sentence "Hello" provides a conventional means of greeting people. If a speaker says "Hello" and means it he will have intentions (a), (b) and (c), and from the hearer's side, the hearer's understanding the utterance will simply consist in those intentions being achieved.

The intentions will be achieved in general if the hearer understands the sentence "Hello," that is understands its meaning, that is understands that under certain conditions its utterance counts as a greeting. Searle gets around the question of circularity by claiming that the notion of greeting is only a feature of the example and not of the analysis, since ultimately the analysis is in terms of rules and the hearer's knowledge of the rules and therefore makes no explicit use in the analyses of any term that involves "means" as part of its own meaning.

The differences which thus exist between the original Grician analysis of meaning_{nn} and Searle's revised analysis of the difference concept of saying something and meaning it can be summarized in the

following manner:

1. Grice's original analysis

   Speaker S means$_{nn}$ something by X = (a) S intends (i-1) the utterance U of X to produce a certain perlocutionary effect PE in hearer H. (b) S intends U to produce PE by means of the recognition of i-1.

2. Searle's revised analysis

   S utters sentence T and means it (i.e., means literally what he says) = S utters T and
   (a) S intends (i-1) the utterance of U of T to produce in H the knowledge (recognition, awareness) that the states of affairs specified by certain of the rules of T obtain (call this effect the illocutionary effect, IE).
   (b) S intends U to produce IE by means of the recognition of i-1.
   (c) S intends that i-1 will be recognized in virtue of (by means of) H's knowledge of (certain of) the rules governing (the elements of) T. (pp. 49-50)

Grice's counter argument against Searle's amendation is presented in his "Utterer's Meaning and Intention" (1969). Here, Grice objects to Searle's critique on the grounds that what Searle is concerned with is the characterization of a particular speech-act (promising) and not with a general discussion of the nature of meaning. At the same time, Grice does not deny the view that when the vehicle of meaning is the sentence (or the utterance of a sentence) the speaker's intentions are to be recognized, in the normal case, by virtue of a knowledge of the conventional use of the sentence. At the same time, Grice wants to treat meaning something by the utterance of a sentence as being only a special case of meaning something by an utterance (in Grice's extended sense of utterance), and to treat a conventional correlation between a sentence and a specific response as providing only one of the ways in which an utterance may be correlated with a response.

In fine, then, Grice does offer us a highly specialized account of meaning by drawing our attention to the relation between natural and non-natural meaning. In like fashion, Searle appears to have adequately utilized an amended version of the Gricean formula in order to lead us into a more useful way of examining the relationship between meaning and speech acts. And it is to this area that we will now direct our attention in examining the concepts of use, usage and meaning.

Meaning as Use

It was Wittgenstein (1957) who was the first to pen the dictum "Don't ask for the meaning: ask for the use." This particular phrase has dominated philosophical discussion for the past thirty five years. Ryle (1951), in examining the concept, argues for the importance of distinguishing between sentences and words. Words, says Ryle, are the "atoms of a language; sentences are the units of speech." Consequently, words, constructions, etc. are what we have to learn in mastering a language whereas sentences are what we produce when we say things. Hence, Wittgenstein's famous dictum was in Ryle's view a piece of advice to philosophers and not directed at lexicographers or translators. It advised philosophers to switch their attention from the "trouble giving words in their dormancy as language-pieces or dictionary items to their utilizations in the actual sayings of things" (in G. H. R. Parkinson, The Theory of Meaning, 1968, p. 114).

What Professor Ryle seems to be primarily concerned with is to distinguish between grammatical faults in the use of words in constructing sentences and faults which, in the use of words to

construct grammatical sentences, violate the rules of sense, of logic, as well as the rules regulating the mutual relations of categories (in Parkinson, 1968, p. 117).

Searle, on the other hand, credits the notion of "meaning as use" as being at the root of three well-known philosophical fallacies.[1] Basically, there are a number of important reasons as to why these fallacies were generated and Searle offers at least one possible explanation. It is this: at the time when confusion arose regarding the question of certain philosophical statements dealing with evaluation and its criteria, philosophers had no general theory of language on which to base their particular conceptual analysis. What they had were a few slogans such as "meaning is use," a catch phrase which embodied the belief that the meaning of a word is not to be found by looking for some associated mental entity in an introspective realm, nor by looking for some entity for which it stands, but rather by carefully examining how the word is actually used in the language. However, as a tool of analysis the notion of use is so vague that it generally led to confusions such as those involving speech acts and assertions.

In sum, Searle states that the use theory of meaning can, as a tool of analysis, provide us only with certain data (viz., raw material for philosophical analysis). Consequently, in uttering a sentence of the form, "X is good," one is characteristically praising something. However, the basis upon which such data are to be

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[1] The naturalistic fallacy fallacy, the speech act fallacy, and the assertion fallacy (Searle, 1969, pp. 131-146).

systematically analysed, explained, or accounted for will, in Searle's view, depend on what other views or theories about language we bring to bear on such data. This is so because the use theory does not by itself provide us with the tools for such an analysis and may, in fact, engender confusions.

Searle effectively utilizes his assessment of "meaning as use" to evaluate the three fallacies within the framework of his general theory of speech acts. Although it is not necessary to become involved in a detailed account of Searle's methodology it is interesting to note the use which he makes of his speech act theory to analyse these three basic problems. For example, in his critique of the naturalistic fallacy fallacy, Searle takes the phrases "Extra Fancy Grade" and its equivalent "means A, B and C," and points out that one is not just an abbreviation for the other. Rather, the distinction between meaning and use here involves a distinction between truth conditions on the one hand and purpose or function on the other. Searle claims that the reason the statement that this apple is A, B and C, entails the statement that this apple is Extra Fancy Grade, and yet the characteristic illocutionary force of an utterance of the sentence used to make the second statement is to grade and the characteristic illocutionary force of an utterance of the sentence used to make the first statement is to describe (emphasis mine), is simply that entailment is a matter of meaning; and the illocutionary force in the second case is a matter of the use of the special terms the sentence contains (pp. 154-155).

In general, there are a number of philosophers who disclaim

the possibility of a speech act theory of meaning as use. Shirley (1975), for one, argues that it is impossible to develop a satisfactory theory of meaning in terms of speech acts, as developed by Searle (1969). Shirley claims that, unlike Austin (who evidently did not attempt a theory of meaning), Searle maintains that the illocutionary act is the significant speech act—the speech act which possesses meaning. After discussing Searle's theory in some detail, Shirley concludes that what his speech act theory of meaning actually does is merely to "show the relation between different illocutionary acts."

Holdcroft (1964) also takes issue with the notion of meaning and illocutionary acts. His position is that it is very doubtful whether the T.I.A. (Theory of Illocutionary Acts) could be used to explain the meaning of all (or most) words unless certain semantic information was used in a very specific manner (which is noted explicated by Holdcroft). Moreover, the fact that it was used in this manner would make the claim an uninteresting one.

Both views seem to rest on a number of spurious assumptions. In the first place, Shirley's claim that Austin did not attempt a theory of meaning is clearly not true. Austin's notion of the rhetic act is clearly an attempt to deal with the question of meaning. Secondly, Searle's revision of Austin's verbal taxonomy represents a further attempt at dealing with the whole question of meaning. Searle's postulation of the propositional act to replace Austin's rhetic act is indeed an attempt to deal with points raised by other philosophers (and Austin as well) regarding the distinction between

locutionary and illocutionary acts. In Searle's view, there is the need to separate out the propositional content of an utterance from its illocutionary force. Secondly, while Holdcroft's position regarding the T.I.A. does have some merit in that Austin's initial formulations evidently did not deal with the question of meaning in a satisfactory manner, subsequent attempts have been made to rectify this shortcoming. Searle's subsequent writings have attempted to fill this void although it is evident that this is not the last word on this topic.

Where, then, does the speech act theory of meaning fit with the notion of a general theory of meaning? It is certainly evident that there are elements of Grice's theory of intentional meaning which are worth preserving. And it is also true that there are other philosophical theories of meaning which need to be considered in order to see where the speech act theory of meaning has applicability and coherence. In this respect, Gilbert Harman's article "Three Levels of Meaning" attempts to do just this by discussing a number of basic philosophical theories of meaning.

Harman (1968), in an article concerned with meaning from the point of view of philosophical analysis, postulates the existence of three levels of meaning. The first level of meaning has to do with what Harman calls "evidence and inference"; the place that an experience has in one's mind or its function in some language game. The second level of meaning has to do with the idea that meaning is a matter of the idea, thought or feeling that an expression communicates. The third level of meaning has something to do with the speech

acts the expression can be used to perform.

In subsequent sections of his paper, Harman discusses some of the familiar objections to each particular theory. Theories of the first sort tend to be criticized on the basis that they ignore the social aspect of language. That is to say, one cannot account for meaning by way of the notion of evidence without consideration of the role of meaning in communication. As well there are frequent uses of language for which the notion of evidence has no application. For example, if one asks a question or gives an order (illocutionary acts?), it would not be appropriate to start looking for the evidence for what was said.

Objections to the second level theory are based on the notion that such theories are circular in their reasoning. Katz's (1966) view that one understands someone else by decoding their words into the corresponding thought or idea is viewed as a circular form of reasoning. The Gricean (1957) view is also explicated and found guilty of the same error (i.e., circularity). Harman goes on to conclude that to treat all speech acts as cases of communication would involve circularity of the sort mentioned above. Moreover, communication of one's intention to be performing a given speech act may not prove successful wherein the speaker is not in a position to promise or to tell someone to do something, no matter how strong his intentions or desires.

Theories of the third variety are criticized on the basis that they ignore the "creative aspect of language use" (Chomsky, 1966). In addition, theories of the third level appear to be afflicted with the

same sort of circularity that appeared in level two theories. For example, Alston's (1964) suggestion of defining sameness of meaning as sameness of illocutionary act potential, where illocutionary acts are the relevant subclass of speech acts, seems to be tautological in its make-up.

Harman's resolution of the foregoing arguments is that they appear to be based on false assumptions (i.e., that the three approaches to the theory of meaning are approaches to the same thing). His feeling is that theories of meaning may attempt to do any of three different things. As theories of language, the first theory would offer an account of the use of language in thinking; the second, an account of the use of language in communication; the third, an account of the use of language in certain institutions, rituals, or practices of a group of speakers (p. 593). Moreover there is a sense in which later levels presuppose earlier ones. Consequently a theory of level two, e.g., a theory of communication of thoughts, presupposes a theory of level one that would say what the various thoughts are.

Hence a theory of level one attempts to explain what it is to think that p, what it is to believe that p, to desire that p, etc. Therefore, even if we do not know what the various expressions of a subject's language mean, we can still describe him as thinking some sentence of his language, believing true some sentence, desiring true some sentence, etc. Thus the problem of saying what it is to believe, think, desire, etc., that p can be reduced to the problem of saying what it is to mean that p by certain words used in thinking.

Put in another way, a theory of the nature of thought, belief,

desire, and other psychological attitudes can appear in the guise of a theory of meaning. Positivists of the extreme sort claim that what a thought means, i.e., what thought it is, is determined by its conditions of verification and refutation. Still others would argue that what a thought is or means is determined by its position in a whole structure of thoughts and related psychological attitudes.

Several philosophers have argued along similar lines without feeling the need for making any reference to meaning. Fodor (1964), Putnam (1960), and Miller, Galanter and Pribram (1960) are of the opinion that "functional states" of the human organism are what constitute psychological states. That these psychological states are realized and how they are realized do not appear to be relevant issues; what is considered relevant is the realization that there is a certain relationship among the various states a person can be in, between such states and observational "input," and between such states and action "output."

Hence, an account of psychological states may be offered by way of a person's use of language. Sellars (in Harman, 1968) states that:

> . . . the meanings of one's words are determined by the role of the words in the evidence-inference-action game, which includes the influence of observation on thought, the influence of thought on thought in inference, and the influence of thought on action via decision and intention . . . (in Harman, 1968, p. 595)

Thus a theory of level two attempts to say what communication is and what is involved in a message's having a particular meaning. At this point, Harman argues (against his earlier injunction) that Grice's theory of meaning avoids the charge of circularity by explaining the meaning of a message (what the speaker means) in terms of the meaning of the thought communicated.

In Harman's view, communication need not involve the use of language. However, ordinary communication makes use of a language which both participants think in and which is not being arbitrarily used as a code. As a result, the hearer assigns, as his interpretation of what the speaker says, either (a) a thought that the hearer expresses using the same words the speaker has used (with some modifications) or (b) a thought that is some simple function of a thought in those words, where the function is determined by context. Similarly, the speaker uses almost the same words he uses to himself in expressing the thought he intends to communicate.

Language, then, is not simply a matter of learning how to communicate one's thoughts to others and to understand others when they attempt to communicate. A child, when first exposed to language supposedly acquires a new system of representation for use in thinking and in the formation of various psychological attitudes. In addition, he acquires the ability to communicate with and understand other speakers of the language. This ability relies heavily on the fact that language has been acquired as an instrument of thought. Consequently it would be a mistake to think of the child as having an ability to perform a certain complicated form of decoding (as do Katz and Fodor, 1964).

A theory of level three would be a theory of social institutions, games, practices, etc. The theory would explain, for example, how the existence of a game of football can make possible scoring a touchdown or how the existence of an institution of banking can make possible writing a cheque. In this respect, such a theory becomes a

theory of meaning wherein the game or institution confers meaning on an act like carrying a ball to a certain place or writing one's name on a piece of paper.

Some institutions, games, practices, etc., involve the use of language and are able to confer meaning on such uses of language. However, this is a different sort of meaning than that involved in levels one and two. Moreover, the use of certain words within an institution, practice or game presupposes the idea that words have meaning as a message (which presupposes that they have meaning when used to express one's thoughts). In one sense, meaning on levels one and two can sometimes presuppose meaning on level three. However, this is only because one can think and communicate about practices, games and institutions.

In sum, Harman has distinguished three levels in the theory of meaning corresponding to the meaning of thoughts, the meaning of messages, and the meaning of speech acts. Distinguishing or sorting out a theory of meaning into three levels helps to clarify one's thinking regarding meaning and helps one to see how a theory of the meaning of speech acts is different from a theory of the meaning of thoughts and that of messages. Moreover, the fact that they are differentiated in this fashion enables one to examine one level (in this case, level three) to see how meaning functions at this level apart from acts of cognition or acts of communication.

IV. READING COMPREHENSION AND MEANING

To this point, discussion has focussed on selected philosophical viewpoints regarding the question of how meaning arises in the use of language. Generally, the emphasis has been upon the elucidation of meaning within the context of the spoken word. In reviewing what has been said it could be stated that the major concerns of philosophers and linguists has been placed upon meaning as it arises at the level of words and sentences. Recently, however, some attention has been given to dealing with meaning within a larger context. Semiotics, as a science which concerns itself with the meaning of signs, attempts to cover a much broader range of topics related to communication and may encompass such wide-ranging notions of "meaningful" acts of communication as dances or clothes-styles.

The study of reading comprehension has, on the other hand, been restricted to a much narrower field of investigation. Generally, the focus of this investigation has been limited to such areas as visual and auditory perception and its relation to comprehension, or to the theoretical writings of psychologists and linguists (Guilford, 1960; Gray, 1960). Currently, the debate concerning reading comprehension is based upon the claim that there is a comparable and systematic analog between the expressive and receptive aspects of general language comprehension.

Jenkinson (1968, 1976) has been aware of this claim for some time and offers some productive insights regarding the notion of how meaning "arises in the use of language," both in its spoken and written form. In her examination of the "parameters" of the "constant"

meaning as it occurs in reading, she conceptualizes four essential types of "knowledge." These are: a knowledge of verbal concepts; a knowledge of grammar which subsumes syntactic and semantic competence at both the sentence and discourse levels; a knowledge of the situations vs "contexts" that are captured in written materials; and a knowledge of the "rules and strategies" of the language game that is implicit in the writer's message (Jenkinson, 1976, p. 74).

These four sources of knowledge provide the foundation for this present investigation of a general theory of reading acts as an integral part of reading processes. They also provide the basis for a critical examination of current notions of the nature of reading comprehension. However, before examining in detail these knowledge sources, it is essential that some attention be given to recent philosophical views on the nature of reading comprehension.

Definitions of Reading Comprehension

In terms of its historical and chronological antecedents, definitions of comprehension in reading may be subsumed under two main headings in the following manner.

Operational definitions in terms of skills. Davis (1944) and Holmes (1960, 1962, 1965) used factor analytic techniques to define comprehension in reading. The governing principle behind this method is to begin with a large number of tests which ostensibly measure reading comprehension and, by utilizing factor analytic techniques, determine the relationships between tests and extract all the factors which the intercorrelations will allow. The factors are named on the

basis of what the tests which load on the factor have in common. These factors, qua factors, define the construct of comprehension. It is not difficult to see the kind of circularity which operates in this line of reasoning.

Non-operational definitions in terms of skills. The general approach to defining comprehension has been to define the term as a set of skills and abilities. The end result of this line of inquiry has resulted in a list of skills which the researcher believes is part of the domain of reading comprehension. Too often, no rationale has been provided nor has any specific means been provided for measuring these skills. Mosberg and Shima (1969) refer to this proliferation of skills as series of "waste-basket construct(s)" (p. 3). Some examples are provided below:

identifying main idea (Staiger and Bliesmer, 1956);
drawing conclusions (Betts, 1956; Simmons, 1965);
induction (Jordan, 1967);
use of context (Robinson, 1966);
noting detail (Traxler, 1951) and so on.

Definitions in terms of process. Mosberg and Shima (1969) see definitions of comprehension in this area falling into two categories: (a) definitions given in terms of cognitive process, higher-order mental processes, and thinking processes, and (b) definitions given in terms of information processing and communications systems. Using their notation system, we have the following:

a. Definitions in terms of cognitive processes. Carroll's (1964) definition is cited. Comprehension is defined as a linguistic process of comprehending morphemes and grammatical constructions in which the morphemes occur. Carroll suggests that the lexical meanings of morphemes can be delineated in terms of the objective referents, attributes and relationships. Meanings of grammatical constructs can be described in terms of the structural relationship among persons, things and spatial-temporal configurations. Carroll contends that problems in comprehension ensue when the text contains lexical, grammatical and ideational information which is not part of the reader's repertoire. In Carroll's view, comprehension occurs in response to some kind of internal representation of a spoken message. Carroll's definition seems to suggest: (1) that the study of reading comprehension should proceed to studying comprehension of spoken messages and the processes by which a written message is reconstructed in terms of the spoken message, and (2) that the study of comprehension should concern itself with both the semantic and grammatical components of messages.

Gray's (1960) definition of reading encompasses four processes in reading. In an earlier article, Gray (1952) argued that comprehension is a higher-order thinking process involving: (1) "weighing of each of many elements in a sentence," (2) "their organization in their proper relations one to another," and (3) "the selection of certain of their connotations and rejection of others" (in Mosberg and Shima, 1969, p. 4).

Stauffer (1967) defines comprehension in terms of two cognitive

processes, assimilation and accommodation (after Piaget, 1968) but fails to specify how these processes are learned or developed or how they function. Johnson (1949), on the other hand, argues that reading is a complex, lifelong process. According to Mosberg and Shima (1969), this process is defined primarily in terms of certain skills which Johnson claims are manifestations of the process.

Spache's (1962) definition of comprehension consists of four processes: (a) cognition, (b) memory, (c) inductive reasoning, and (d) deductive reasoning. The processes Spache identifies are taken from Smith (1960) and Guilford (1960). Cognition refers to recognition of words by form, shape, structural parts and context. Memory refers to the recall of one of several associations to each word which is appropriate in the particular context. In comprehending a sentence, a chain of associations is elicited, and these associations in turn form higher-order associations on the basis of word groupings. These groupings of associations coalesce into the stated or implied meaning of a sentence. The meanings of successive sentences are inductively combined into the main idea. Furthermore, the sentence meanings may form the basis for various deductions. In all, the whole theory has a behaviouristic ring wherein "chains of associations coalesce" from the process of recognition to that of the stated or implied meaning of a sentence. However, the notion that meanings in sentences are built in a successive, linear fashion does not seem plausible despite the linear, successive nature of print itself.

b. Definitions in terms of information processing and communications systems. Reading from this perspective is defined as

a process of communication in which a message is transmitted, in a graphic mode, between individuals (Kingston, 1961, 1962; Cleland, 1965). A necessary (but not sufficient) condition for successful communication is a commonality of agreement between transmitter and receiver as to the meanings of the symbols employed in the message. Comprehension is the degree to which the reader's interpretation is congruent with that of the writer (or authority figure). Kingston (1961) thus conceptualizes the comprehension process as a function of the "congruence of associations to a given symbol between the transmitter (or authority) and the receiver, the familiarity of the reader with the structural form of the message, and the comparability of the cognitive level of abstraction of the message with that of the reader."

McCreary and Surkan (1965), in their model of the communication process, build on the Kingston model. The analogy of the McCreary and Surkan model is to a "hardware system of communications." While it is difficult to generalize from one system to the other, some analogs can undoubtedly be found in human systems of communication. The McCreary and Surkan model describes the processes involved in the communication channel (the reader) in the following manner:

> During the processing of the message, i.e. prior to storage, five processes are identified: sampling, filtering, coding, decoding and matching. The incoming message is sampled, irrelevant information and noise are filtered out, the message is coded in some language form, the information for retention is again filtered, the message is decoded or interpreted, and finally, the message is matched with the receiver's prior knowledge and concepts. Storage of information is seen as occurring by a "chunking" process. (Mosberg and Shyma, 1969, p. 6)

One of the major problems with a communication channel system

as a description of the comprehension process has to do with how "information" is to be defined. If information is, as McCreary and Surkan (1965) claim, the reduction of uncertainty, then the reader is faced with the monumental task of trying to determine that probability of occurrence of each word in the passage as a function of the preceding words. Mosberg and Shyma (1969) feel that what is needed for the construction of a human information processing system is a definition of information which includes both the concept of information in terms of uncertainty in the statistical sense and of information in terms of the value of the semantic information. In sum, such a definition as that proferred by information processing and communication systems, views comprehension as a system of processes involving linguistic, psychological and perceptual processes.

Philosophical analysis of the term "reading comprehension." One of the few studies to attempt a critical analysis of the term "comprehension" was that carried out by Stern (1971). In a doctoral dissertation designed to analyze (philosophically) the use of the term "comprehension" in an educational context, Stern assembled a collection of samples in the area of reading methodology—a system of principles, practices and procedures involved basically with reading instruction.

Using books and articles published during the past ten years, Stern selected twenty-one books and twenty-six articles for examination. Following the analytical methods developed by Wittgenstein (1953) and Austin (1962), Stern (1973) came up with what he called

"the nomenclature of reading instruction: the labels that have been used in the past decade to talk about the strategy and tactics involved in the teaching of reading for comprehension" (p. 247).

A representative sample of these expressions is:

1. Literal comprehension
2. Comprehension as meaningful reading
3. Comprehension as critical reading
4. Measuring comprehension
5. Comprehension of words, thought units, and so on (p. 247).

What appears to surface in Stern's analysis of the collections of samples is the "recognition of the verbal characteristics of the linguistic acts offered as definitions of 'comprehension'" (p. 255). The results of his analysis led him to conclude that some reading methodologists believe they are defining comprehension when, in fact, all that is being accomplished is "stipulating the substitutability of a number of terms for 'comprehension.'"

The outcome of Stern's analysis of the use of the term "comprehension" by reading methodologists led him to the following conclusions:

1. The term "comprehension" operates in the language-game of meaning.
2. In talking about the teaching of meaning, reading methodologists appear to be employing some theories of meaning, which, when made explicit, seem to correspond to certain philosophical theories of meaning which are no longer held in repute in philosophical quarters.
3. Although there appears to be some connection between the dictionary use of "comprehension" and its use by reading methodologists, the latter appear to use the term to cover a much wider range of cases.

4. The following central uses of 'comprehension' by reading methodologists can be exhibited: (1) 'comprehension' is used as degrees or levels of grasping the meaning of the printed page; (2) 'comprehension' is used as a set of skills and abilities which can be measured; (3) 'comprehension' is used as grasping the meaning of various linguistic units; (4) 'comprehension' is used as a process equivalent to thinking or understanding.

5. Reading methodologists lack an adequate theory of meaning to explain the difference between words and sentences, as semantic concepts, and the relationship between them. They appear to assume that comprehension, as an act of disclosing meaning, can also function as an act of ostensive explanation for elucidating the semantic concepts of words and sentences. Apparently, they believe that the ostensive teaching of the various linguistic units is an adequate way for giving the meaning of these linguistic expressions. They fail to consider the semiotic relationships that have to be drawn to complete the picture.

6. Some reading methodologists apparently believe they are defining the term 'comprehension' by stipulating the substitutability of a number of terms for 'comprehension' rather than showing the terms as fulfilling the same roles or following the same set of rules.

7. The use of comprehension as a set of skills or abilities can be exposed as a deviant or trailing-off use of the term. (p. 256)

The upshot of Stern's analysis underscores the fact that the way in which "comprehension" is being used by reading practitioners is divorced, in part, from theoretical considerations of language and linguistic performance. In defining comprehension in reading, there seems to be an inordinate concern with psychological considerations about the teaching of meaning wherein "concern is expressed in those linguistic acts which associate reading comprehension with cognitive processes" (Stern, 1973, p. 257).

Recent developments in the field of reading research have made researchers aware of the apparent weaknesses in the definition

of the term "reading comprehension." And although reading methodologists lack an adequate theory of meaning for explaining the difference between words and sentences as semantic concepts (and the relationship between them), there is growing evidence that current research is now grounded on a more elaborated and clear-cut conceptual basis.

At the same time, there has been an increasing awareness on the part of researchers to operate from a stronger theoretical basis in carrying out ongoing research. Shuy (1977) and Guthrie (1977) represent some of the most recent attempts to relate reading processes to such diverse topics as grammar, sociolinguistics, pragmatics, and the ethnography of speaking.

As Jenkinson (1976) states:

> . . . the most productive insights frequently emerge from the interplay and friction between the differences of disparate disciplines, from the intersection of one area of knowledge with another. (p. 61)

V. SUMMARY OF THE CHAPTER

The basic purpose of this examination of the nature of meaning and reading comprehension was to place the study of meaning squarely within the framework of basic philosophical concerns related to meaning in a general sense. In this respect, it should be noted that the question of how meaning arises in the use of language is at the heart of current philosophical speculation in the area of modern analytical philosophy.

Two concepts basic to present day philosophical speculation as to the nature of meaning were examined. The first of these, semantics, was discussed in relation to its place within a "general empirical

theory of language." Reference was made to Leech's (1974) basic notion of conceptual meaning as part of the "seven types of meaning," a series of broad domains delineating the various kinds of meaning.

The second aspect of meaning discussed was concerned with an analysis of speech act theories of meaning. Grice's (1957) intentional/causal theory was examined in light of Searle's (1969) critique of the Gricean view. Searle's amended version of the Gricean theory was examined in some detail in light of the fact that Searle's general theory of speech acts forms the philosophical basis for a study of reading acts.

The notion of "meaning as use" was also analyzed, especially in terms of the contributions made to this particular viewpoint by Wittgenstein (1953), Austin (1962) and Searle (1969). Harman's (1968) "three levels of meaning" was also discussed owing to the fact that his theoretical framework suggests the place that a general theory of speech acts has within a general theory of meaning.

Finally, reading comprehension and meaning were discussed. Stern's (1971, 1973) analysis of the term "reading comprehension" was presented as an exemplary study which utilized the methodology of philosophical analysis in its examination.

In the following chapter, the notion of reading comprehension will be examined in relation to its place within the framework of theories of the reading process.

CHAPTER V

THE NATURE OF THE READING PROCESS

I. INTRODUCTION

> . . . in order to understand the reading process we need to synthesize and bring together related disciplines in coordinated research efforts . . . the most productive insights frequently emerge from the interplay and friction between the differences of disparate disciplines, from the intersection of one area of knowledge with another. (Jenkinson, 1976, p. 61)

Attempts to achieve clarity with respect to the basic nature of the reading process have been frustrated by the complexity of the process itself and by the diversity of approaches to the study of the process. Linguistics, psycholinguistics, and information processing theory, to name but three, have all been utilized as theoretical underpinnings to explain the basic nature of reading processes. It is important, therefore, to now "synthesize and bring together" the most judicious insights which each related discipline has to offer in order to attempt a more complete picture of the reading process.

In this regard, the collaborated efforts of research efforts from numerous sources should provide the foundation upon which subsequent research may be extended. Furthermore, the special problems related to the integration of knowledge from the various disciplines are tied to the special problem of being able to structure that collaboration in such a manner as to provide a number of constructive insights as to the nature of reading processes as such. Such insights

would also extend our existing knowledge and would provide a framework for ongoing dialogue regarding the basic nature of the reading process.

At the heart of this dialogue is the notion that there are a number of relevant "sources of knowledge" which form the foundation upon which our understanding of reading processes is based. Consequently, in elucidating the fundamental aspects of this process, it will be necessary to examine briefly the historical basis of the development of the concept. In other words, an examination of the historical antecedents which led to present day understandings should naturally lead to a further understanding regarding the essential nature of the reading process.

Consequently, the scope of the discussion regarding the nature of the reading process will necessarily involve a historical review of the process. The second aspect will concern itself with an examination of the "sources of knowledge" which have enlightened our understanding of the reading process. Finally, a number of models of the reading process will be examined, owing to the fact that their development represents an attempt by researchers to provide a theoretical framework for representing the nature of the process itself.

II. HISTORICAL BACKGROUND

Systematic study regarding the nature of the reading process began at a time when experimental studies in psychology were just beginning. Wundt's laboratory in Leipzig, in the 1870's, provided the

setting for the first research studies in the area of experimental psychology.

J. M. Cattell (1885), whose work on letter and word recognition, on the legibility of letters and print types, and on stimulus intensity, formed the basis for the majority of reading studies for almost thirty years. Cattell also had an important, though indirect, influence on reading through his work on mental tests and measurements.

During the latter part of the 1880's, an examination of reading processes became the main area of study for experimental psychologists. Topics such as cues for letter and word recognition, the eye-voice span, parallel processing, the nature of comprehension, and sub-vocalization were the principal research concerns for a period of almost twenty years.

Shortly thereafter, both Dearborn (1906) and Huey (1908/1968) presented comprehensive treatises regarding the essential nature of reading processes. Huey's writings were particularly relevant at that time and are presently undergoing a revival of interest amongst researchers in the field of reading. His work is relevant in that Huey dealt not only with the experimental work on perception and rate of reading, but also because he was interested in such topics as the function of subvocal speech, the nature of meaning, and the history of reading and reading methodology.

Following the publication of Huey's book in 1908, the emphasis in research shifted from a concern with basic processes to that of teaching and testing as it related to reading. Two factors

which may have influenced the output of research into basic reading processes had to do, first of all, with the domination of behavioristic tendencies in psychology and, secondly, with the preoccupation over assessment in education. One other factor was to play as important a role in furthering research as the other two considerations. It was this: research support into basic processes was found to be almost non-existent and often very difficult to obtain, especially for theoretical work.

However, towards the end of the 1950's, a renewed interest in research into basic processes was initiated by psychologists, linguists, and others. Furthermore, funding for basic research was now much easier to obtain. Project Literacy represented one such project wherein initial studies focussed its research into such areas as letter recognition, letter-sound correspondences, children's abilities to segment words into separate sounds, and a variety of topics related to perception and learning. Subsequent studies have in recent times concentrated their efforts in similar areas and have extended the range of topics to such diverse notions as comprehension in reading, oral reading errors, and the eye-voice span. Presently, the range of research interests is extensive and wide-ranging. Basically, the current emphasis appears to be concentrated upon an examination of the underlying nature of reading processes coupled with the development of models as a means for exhibiting the functioning of these self-same processes.[1]

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[1]Within the past decade two basic research summaries have been undertaken. These are: H. Singer and R. Ruddell (Eds.), Theoretical models and processes of reading (2nd ed.), Newark, Delaware: I.R.A., 1976, and F. B. Davis (Ed.), The Literature of research in reading with emphasis on models (Report No. 2), Washington, D.C.: U. S. Department of Health, Education, and Welfare, 1971.

III. CURRENT RESEARCH FOCUS

Sources of Knowledge for a Theory of the Reading Process

The list of possible sources of knowledge which have contributed to a greater understanding of the reading process is, of course, extensive. As a consequence, some limitations upon the scope of this survey must be imposed. Hence, only those areas which are felt to be pertinent to this investigation will be considered. Generally the following disciplines were felt to be germane to this study: linguistics, psycholinguistics, psychology, information processing theory, and philosophy.

Despite the limiting nature of this investigation, the areas chosen for study do represent extensive sources of knowledge. Consequently, further limitations were required in that only those studies were chosen which were felt to be relevant to the development of a general theory of reading acts.

A further constraint which impinged upon the central concerns of this investigation has to do with the nature of the process itself. To illustrate, one of the basic premises of this study is that there are a number of unique aspects which form an integral part of the total reading process. As Jenkinson (1976) states:

> Reading involves one form of verbal comprehension. While written language may on occasion be comprehended as speech . . . this is neither probable nor necessary for the accomplished reader. Written language must be analyzed directly for meaning. The processes involved in reading differ . . . from those involved in speech. (p. 61)

Hence, there is the need, for example, to draw the distinction between the processes of mature readers and those of beginning readers.

Secondly, there is the need to decide whether one is dealing with the processes of oral reading as opposed to silent reading, and to distinguish between listening as an act and reading as an act. There is also the necessity for coming to terms with such basic reading terminology as the decoding, recoding, associating, and testing of meaning, along with such notions as the storage and retrieval, and encoding of responses to print. All of these, along with related aspects of the reading process, need to be taken into account in the development of a coherent and consistent account of a general theory of reading acts.

The foregoing constraints have, in the main, suggested that the focal point of this investigation be concerned with the silent reading processes of mature readers. Such an approach reflects the desire to avoid some of the perplexing issues which naturally arise when one attempts too comprehensive a review of the literature. However, some references will be made to the beginning reading process in light of the fact that there is a growing body of research related to the study of early language development using a speech act framework (see Bruner, 1975; Dore, 1975, 1977; Garvey, 1975).

Written and Spoken Language

The precise nature of the differences between spoken and written language is still very much a subject of ongoing research and debate. Walker (1973), for one, attempted to determine whether the processes by which the reader understands written language, having successfully decoded it, are the same processes as those involved in the comprehension of spoken discourse or whether, in fact, there are

a different set of comprehension processes involved.

From the point of view of casual observation, there are some readily apparent syntactic differences between the spoken and the written word. Conversational form is, by and large, highly dependent upon certain agreed-upon rules of meaning between speaker and listener. This form is also highly dependent upon contextual constraints wherein the use of gesture and facial expression lends a great deal of understanding to what is being said (along with other factors such as intonation, stress, pitch, etc., within speech itself). Halliday (1964) refers to spoken language as having an "inter-personal" function. In this respect, speakers are able to use language for all the specific forms of personal expression and social interaction. Language, in Halliday's view, also possesses an ideational function, the essential purpose of which is to convey ideas, whether they be about things, actions, directions, or feelings. Written language, for the most part, appears to fit this notion in terms of its impact upon the reader.

Spoken discourse, as a medium of communication, is characterized by numerous repetitions and redundant expressions. Spoken discourse also has the advantage of the immediate contextual situation—the shared perceptions, facial expressions, the totality of non-verbal cues which together lend meaning to the whole of the message being communicated. Written language, by comparison, compensates for this lack by allowing the reader to "retrace his visual steps" and to reflect and rethink the message conveyed in printed form.

In Walker's (1973) view, reading can be seen as a "static

array of visual cues." For Walker, reading is a reconstructive process based upon the information processing principles of cue selection and message reconstruction (p. 22). Listening, on the other hand, utilizes transient, acoustic cues in a temporal dimension. The reader, unlike the listener, is in control of his rate of processing and can adjust his rate to the demands of the reading task at hand.

In looking at the differences between listening and reading, Walker (1973) concludes that (in reading), "cue sampling and meaning reconstruction are more precise processes than listening, bearing greater fidelity to the message than is the case in the latter" (p. 39). Such a view is consistent with Olson's (1977) distinction between the spoken and written word as that between "utterance" and "text" and in which the transition from utterance to text involves increasing explicitness so that language (as text) is able to stand increasingly as an autonomous representation of meaning. Hence, in prose text, the criterion for the success of a statement is its formal structure: "the meaning is in the text."

Furthermore, knowledge which has been gleaned from ongoing research and philosophical speculation regarding the nature of language processes, has suggested that there are important differences between the spoken and written forms of language. Some of these sources reflect specific views regarding language structure and functioning and should, therefore, be examined in turn in order to note their specific viewpoints.

Linguistics and psycholinguistics. Human communication is unique in that it involves the individual in the act of sharing a symbolic system with others who also have the capability for encoding and decoding by way of this system, and whose coding behaviors are systematically affected by the details of the communication system they are using. Linguistics, which is representative of such a symbolic system, provides us with a theory of human symbolic action in communication. In point of fact, the whole conceptual structure of phonology, syntax and semantics has exerted a considerable influence upon the field of reading research. At the same time, however, linguistic theory has undergone some drastic theoretical reformulations since the time of Chomsky's (1957, 1965) original views on the subject of transformational grammar. In recent times, for example, the psychological reality of generative transformational grammar has come under attack from a number of linguists (see Derwing, 1973).

In Chomsky's (1965) original formulation, a generative grammar represents a system of rules which can generate an indefinitely large number of sentences. This system of rules can be analyzed into three major components of a generative grammar: the syntactic, phonological, and semantic components. The syntactic component specifies for each sentence a deep and surface structure. The deep structure enters into the semantic component and receives a semantic interpretation, and the surface structure is given a phonetic interpretation by the rules of the phonological component. Both the phonological and semantic components are purely interpretive since they use information provided by the syntactic component of the grammar.

Generative semantics, as an alternative theoretical viewpoint, assumes that a grammar contains only a complex set of transformational rules which define simultaneously semantic and syntactic properties of sentences, and which directly link semantic interpretations with surface structures. Figure 5 highlights the major points of contrast between these two approaches to grammatical theory.

Generally, attempts to integrate transformational grammar as a theoretical construct with reading theory have not been fruitful. Cosens (1974), for one, utilizes the theoretical positions of Prideaux (1972) and Harris (1970) as alternative methods of analyzing sentences other than that of transformational grammar. Prideaux, for example, proposes that structural ambiguity in selected sentences can be resolved by surface labelled bracketing. He argues that since disambiguation is possible at the surface structure level through the use of distinct labelled bracketing and since sentences are different only in meaning, that the positing of a level of deep structure seems superfluous.

By way of contrast, however, research in reading does have some information to contribute to the field of linguistic research. Jenkinson (1976) cites studies by Fagan (1969), Latham (1973), and Cosens (1974) as evidence that it may not be the number of transformations but the type and frequency of transformations in sentences which cause problems for readers.

A significant figure in the field of reading research based on psycholinguistics is Goodman (1969) whose work on miscue analysis is based on an analysis of the phonological, syntactic and semantic elements in terms of errors made in the oral productions of pupils.

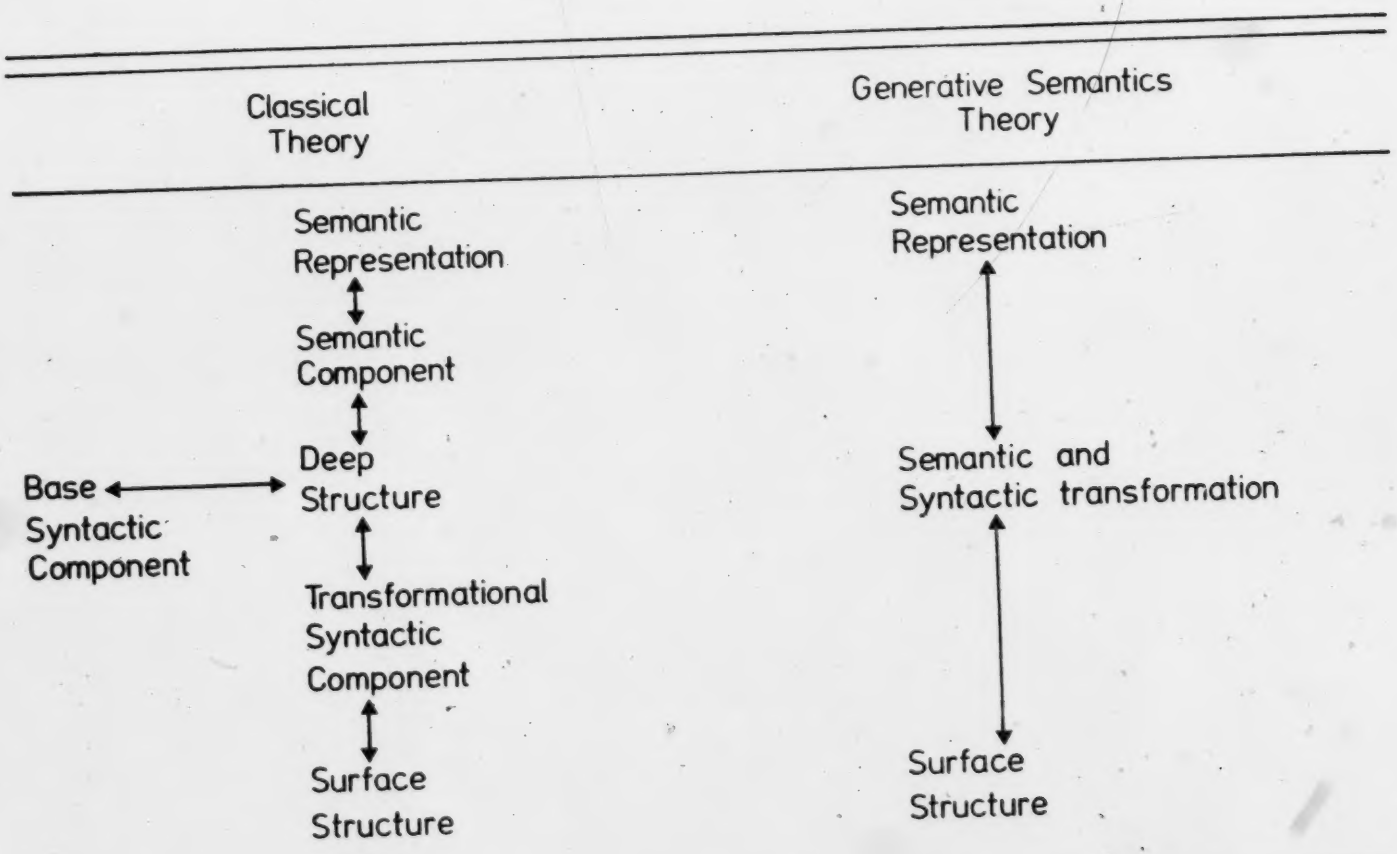

Figure 5

Classical and Generative Semantics Theory
(In Frentz, 1974, p. 126)

Fagan (1969) and Cosens (1974) analyzed the problems that the difficulties which varying transformation presented for readers during their elementary school years.

Another study which utilized a number of theoretical viewpoints is Latham's (1974) study which revealed that college students synthesize written language in grammatical forms corresponding to surface structures and grammatical constituents without recourse to deep structure. The study also indicated that the methods of processing oral language suggested by Luria (1966a, 1966b) in terms of both "simultaneous and successive synthesis" were effectively demonstrated. In other words, those readers who possessed immediate simultaneous recognition of meaningful word groups were able to comprehend in a much more effective manner than those readers who tended to read in a word by word fashion. The study also provides some validity for Neisser's (1967) concept of analysis-by-synthesis as it is applied to reading; a concept which involves a kind of "silent calculation" by which the "language processor" formulates an hypothesis about the original message.

Another writer in the psycholinguistic tradition is Frank Smith (1971) who states that although proficient readers make considerable use of syntactic redundancy in reading for meaning, the beginning reader is forced to analyze all the constituents of the surface representations to apply syntactic skills. He suggests that the beginning reader must attempt to identify the words of the visual array one at a time without any prediction. Cosens (1974), on the other hand, suggests that there is increasing evidence from studies

of oral reading errors, that children predict from syntactic patterns very early in their reading. The studies of Mackinnon (1959), K. Goodman (1965), along with Y. Goodman (1969), and others, all claim that analyses of children's errors made while reading indicate greater sensitivity to the grammatical structure of the language than to the visual form of the words.

In addition to their concern with syntax, psycholinguists are concerned with the basic question of meaning. K. Goodman (1970), who utilizes a psycholinguistic framework for his studies of reading, conceptualizes the process as a "psycholinguistic guessing game" in which the reader picks and chooses from the available information only enough to select and predict a language structure which is decodable. Reading is not a process of precise sequential word recognition. Rather, the reader utilizes the least amount of available information to reconstruct the meaning of the written message. Goodman's thesis is that proficient readers are able to make the transition from print to meaning with ease. However, for the beginning reader, reading for meaning necessarily encompasses recoding graphic input as speech which is then decoded. At this stage, the child utilizes his knowledge of language in both recoding and decoding processes.

The role of psycholinguistics has been defined by Ruddell (1969) who states that this particular area of study has more to offer to language skills learning than either that of linguistics or psychology considered separately. For example, in contrast to the linguist who offers a description of language competency through

systems for describing and generating sentences, and to the psychologist who examines learning theory from various viewpoints, the psycholinguist's interest lies in exploring the psychological reality of linguistic descriptions. Furthermore, psycholinguistics considers one of its major goals to be the development of a theory or theories of language performance.

Along with other reading researchers such as Smith (1971, 1973) and Goodman (1970), Ruddell has developed a theory of the reading process utilizing a psycholinguistic framework as the basis for his model. In Ruddell's view, psycholinguistics involves developing an understanding and explanation of language processing whereas reading instruction is mainly concerned with the ability to decode and comprehend written language. His definition of reading is, therefore, biased in the following direction:

> Reading is . . . a complex psycholinguistic behavior which consists of decoding written language units, processing the resulting language counterparts through structural and semantic dimensions, and interpreting the deep structure data relative to an individual's established objectives. (Ruddell, 1969, p. 61)

Additional support for the psycholinguistic view of reading as espoused by Goodman and others is provided by Kolers (1970), Chomsky and Halle (1968), and Neisser (1967). In Kolers' view, the proficient reader operates at the level of semantic or logical constraints. The reader, therefore, need not pay that much attention to the actual printed text. The analysis-by-synthesis model of listening developed by Chomsky and Halle is also similar to Goodman's hypothesis-testing theory. And Neisser's (1967) view of reading as a "continuous silent stream of thought" is consistent with the view that reading entails

elements of logical thought.

There is additional theoretical support for the views expressed by psycholinguists. Ryan and Semmel (1969) and Anisfeld (1966) support the Goodman position that reading is a psycholinguistic guessing game. Alternative viewpoints have been offered by Brown (1970) and Levin (1965).

Basically, the view that is espoused in psycholinguistic literature is that meaning apparently resides in the deep structure or that pupils move from surface structure to an underlying structure and then to meaning. Cosens (1974) argues cogently against such a view in her study. She quotes Rommetveit (1968), Prideaux (1972) and Harris (1970), writers and researchers who lend support to the view of transformations as consisting of equivalence class relations among sentences. In this respect, the primary interest is in syntactic structure. Moreover, this view has relevance for the study of language from a philosophical point of view in that philosophers such as Searle (1969) are interested in the relationship of syntactic structures to speech acts.

To sum up, linguistics as a discipline represents an important source of knowledge in the development of theories of the reading process. Essentially, the basic contribution from linguistics is its conception of language as a code; a set of rules by which grammatical utterances are produced and in terms of which they are comprehended in order to abstract their meaning. This view of language has provided some important insights as to the formal nature of language and has provided linguists with some powerful mathematical

techniques for analyzing language. However, as Bruner (1975) states, all advances in knowledge have their attendant costs wherein "depth of insight must often be earned at the cost of breadth of perspective." Hence, while linguists and others have learned much about the structure of language, important considerations about its function have largely been ignored.

Cognitive psychology. The contributions of psychology to the field of reading are difficult to assess owing to the diversity of their offerings. It is important to note, however, that the bulk of the findings of behavioral analysis, of child development, including child cognition, of general learning theory, of theories of perception, have been applied principally to the teaching of reading (Jenkinson, 1969, p. 24). Relatively few studies have devoted themselves to questions related to how meaning is obtained in the process of reading. Recently, however, psychologists (along with linguists) have become more concerned with the role that meaning has to play within cognitive processes (i.e., how meaning arises in the utilization of cognitive processes).

A further consideration to be kept in mind is that the bulk of the current research in the area of cognitive psychology has been devoted to the development of information processing models of the mind in order to deal with problems posed by such factors as memory load, attentional constraints, information flow (i.e., the structure of human memory) and with how the individual deals with meaningful versus irrelevant kinds of information. It seems important then, that a number of cognitive models be examined, models which utilize

an information processing format as part of their basic framework.

The Shiffren and Schneider (1977) model of controlled and automatic information processing. Within the framework of this model, meaning is conceptualized as a large and permanent collection of nodes which become complexly and increasingly interassociated and interrelated through learning. Most of these nodes are normally passive and inactive and termed long-term store or LTS, when in the inactive state. The set of currently active nodes is termed short-term store or STS. LTS is thus a permanent, passive repository for information. STS is a temporary state; information in STS is said to be lost or forgotten when it reverts from an active to an inactive phase. Control of the information-processing system is carried out through a manipulation of the flow of information into and out of STS. These control processes include decisions of all sorts: rehearsal, coding, and search of short- and long-term store. LTS contains learned sequences of information which may be initiated by a control process or by environmental or internal information input, but are then executed automatically with few demands on the capacity of STS.[1] Figure 6 provides a detailed overview of the model.

Analysis-by-synthesis models of information processing. Neisser (1967) proposes a general model that postulates an early stage of parallel processing not under subject control called "preattentive"

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[1] Craik and Tulving (1975) propose a levels of processing framework for human memory as an alternative theory to the notions of STS and LTS as presented by Shiffren and Schneider (1977) and others.

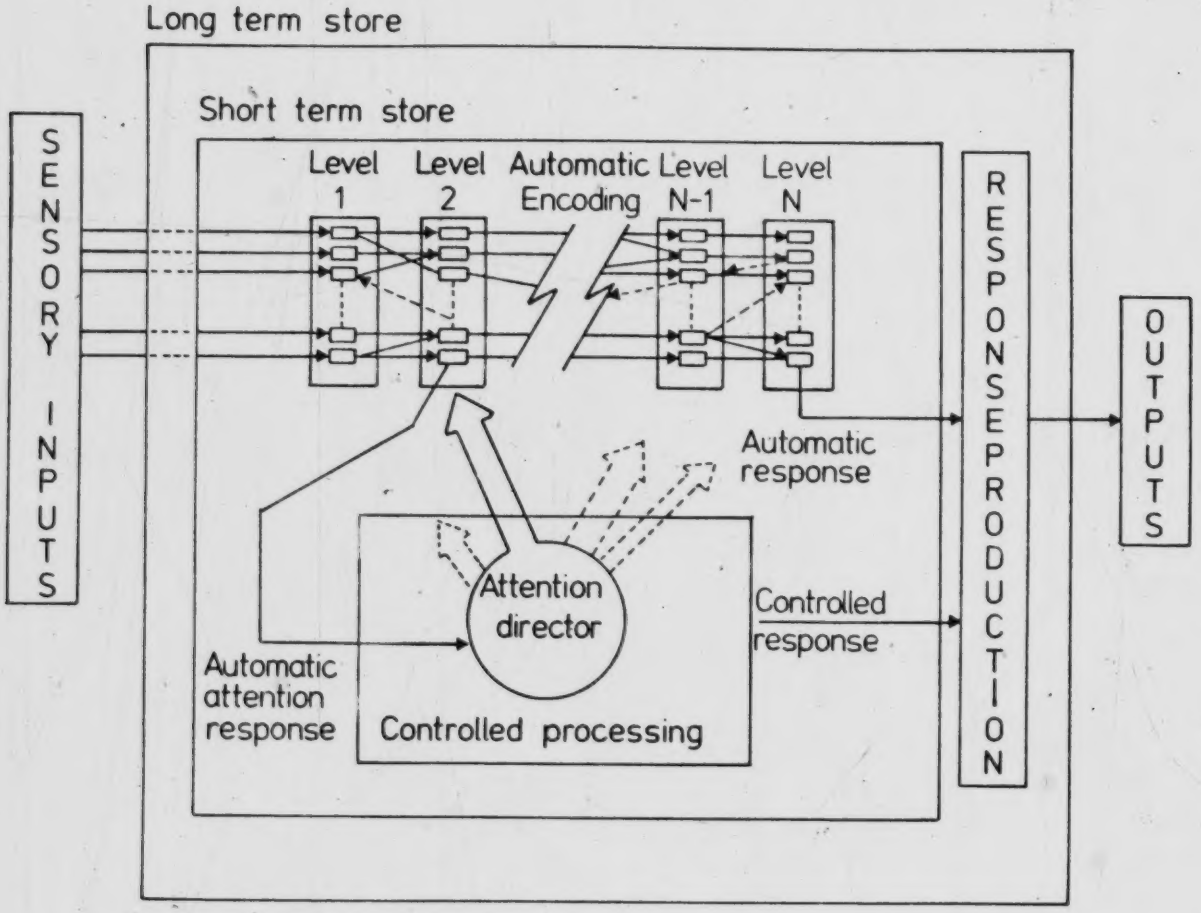

Figure 6

A Model for Automatic and Controlled Processing
(From Shiffren and Schneider, 1977, p. 162)

(i.e., similar to the Shiffren and Schneider systematic, automatic stage), and a later, controllable, serial stage referred to as "focal attention." There are definite similarities between the two models. Neisser, for example, observes that preattentive processes can control attention or responses (as in eye movements). There is also the suggestion from research findings that practice can lead to cognitive search becoming dependent on preattentive mechanisms, thereby leading detection to become automatic.

The Shiffren and Schneider (1977) model, along with Neisser's concepts of preattentive processes and focal attention, represent useful theoretical constructs in that they attempt to account for perceptual, linguistic and semantic events which occur simultaneously (in parallel). In other words, processing of events is possible at both higher and lower levels in which higher level features can sometimes influence the processing of lower level features. The application to reading processes can be found in the notion that some readers can, at times, move from print to meaning directly without the necessity of an intermediate decoding process (cf. K. Goodman, 1965; F. Smith, 1971).

Neurological theory: Luria's notion of simultaneous and successive syntheses. Historically speaking, the basis of Luria's model is taken from his original observations that the cortex is engaged in two types of integrative activity— simultaneous and successive. His observations were based on clinical examinations of soldiers along with regular civilians who had lesions in the left hemisphere of the cortex

(Luria, 1966a, 1966b; Luria and Tzvetkova, 1967). Luria found that individuals with lesions in the occipital-parietal area often led to disturbances of the simultaneous organisation of stimuli, whereas those with lesions in the fronto-temporal area resulted in disturbances associated with successive processing.

In Luria's (1971) view, the brain appears to be made up of three major functional units: (a) the arousal and attention unit located in the upper brain stem, the reticular formation, and to some degree in the limbic cortex and hippocampus; (b) the unit involved with the input, recoding, and storage of information which is the most important one for information integration, located in the occipital, parietal and frontal-temporal regions, as well as in their underlying structures; (c) the unit for planning and program behavior, located in the frontal lobe.

Luria suggests that the processing of the cognitive content by the brain is carried out through the employment of a series of exteroceptive, proprioceptive, and interoceptive analyzers. These analyzers collectively synthesize input into various forms and while they are spatially distinct, there is, nonetheless, afferent synthesis of incoming information into whole, dynamic systems.

Simultaneous and successive synthesis, as an explanatory model for cognitive abilities, has been the subject of much recent discussion and research (Das, 1973; Das, Kirby and Jarman, 1975a; Das and Malloy, 1975b; Macleod, 1978). Das (1973) proposed that simultaneous and successive processing are habitual modes of processing information employed by an individual while solving a variety of

cognitive problems. Both are seen as centrally mediating processes. In simultaneous integration, one is required to arrange stimuli in a simultaneous manner in order to arrive at a judgement. In Luria's words, simultaneous integration is concerned with the "synthesis of individual elements into simultaneous and, above all, spatial groups" (Luria, 1966b, p. 83). As such, simultaneous synthesis possesses the property of surveyability and refers to any system of relationships.

Luria's hypothetical model proposes that simultaneous synthesis are of three varieties:

(a) Direct Perception: The process of perception is such that the organism is selectively attentive to the stimulus field. This leads to the formation of a synthesis of the stimulus input in the brain. In Luria's view, this type of formation is primarily spatial, even in the case of the acoustic analyzer.

(b) Mnestic processes: This refers to the organization of stimulus traces from earlier experiences. Some examples of this type of integration involve the construction of a gestalt of a visual image by the subject when portions of the image are shown consecutively, and the organization of consecutively presented words into a group on the basis of a criterion. There is undoubtedly here a suggestion of long-term and short-term memory processes.

(c) Complex intellectual processes: In order for the person to comprehend systems of relationships, it is essential that the components of the systems be represented simultaneously. In this respect, the relationships among the components of the systems can be examined and confirmed. Luria states that the use of spatial

presentation of the components is an aid to this process, for when a unitary representation of components is formed, the system is readily surveyable.

Successive information processing on the other hand, refers to processing of information in a serial order. The relevant distinction to be made between this type of information processing and simultaneous processing is that in successive processing the system is not totally surveyable at any point in time. What you have is a system of cues consecutively activating the components. However, successive synthesis, like its counterpart (simultaneous synthesis) has three varieties: perceptual, mnestic, and complex intellectual. In Luria's view, the clearest example of the last variety of successive processing is human speech. Hence, grammatical structures are so composed that the processing of syntactical components is dependent upon their sequential relationships within sentence structures. As a consequence, grammatical structures which require understanding in terms of their relationships are affected by disturbances of simultaneous synthesis, whereas sequential structures are affected by successive synthesis.

Using Luria's (1966a, 1966b, 1971) principles as a basis, Das et al. (1975) propose a model of information integration. In their view, the model has four basic units: the input, the sensory register, the central processing unit, and the unit for output. The units are shown in Figure 7.

According to Das et al., a stimulus may be presented to any of the receptors, extero-, intero-, or proprioceptors, and within

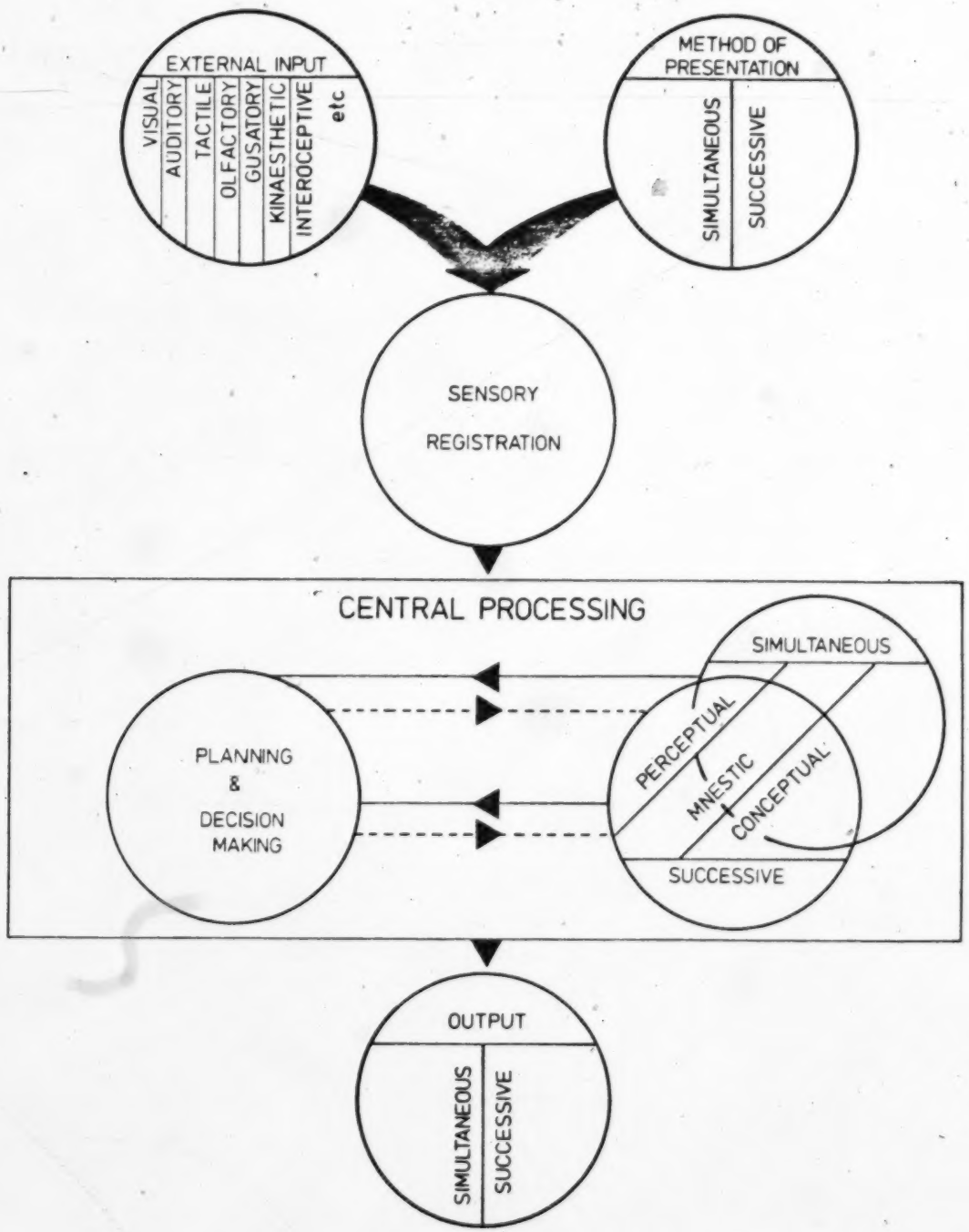

Figure 7

Model of Information Integration
(From Das et al., 1975, p. 90)

exteroceptors to any one of the sense modalities. Moreover, the input can be presented in a parallel (simultaneous) or a serial (successive) manner. The stimulus is immediately registered by the sensory register and this information is then passed on for central processing.

In computer terminology, the sensory register may be regarded as a buffer. Ostensibly, the relationship between the sensory register and the central processing unit can be conceptualized in two ways. First of all, the central processor interrogates the buffer to see if anything is there. If this is the case, the central processor allows a transmission to be made; on the other hand, this process could be seen as one in which the buffer interrupts the processor and forces it to accept information. Das et al. (1975) see the latter occurring more frequently, owing to the fact that sensory information cannot be delayed.

There is also some evidence to show that the sensory register works in parallel. Sperling (cited in Das et al., 1975) has shown that a 3 x 4 visual array is not retained as a sequence, but rather as a simultaneous icon. It therefore seems evident that complex stimuli are first processed in parallel (see Averbach and Arnell, 1961; Neisser, 1967; Sperling, 1960). These stimuli are then "read out" serially in the central processing unit.

From the model we can see that the central processing unit has three major components: that which processes separate information into simultaneous groups, that which processes discrete information into temporally organized successive series, and the decision-making and planning component which uses the information so integrated by

the other two components. According to Das et al., the processing in these components is not affected by the form of the sensory input. That is to say, visual information can be processed successively and auditory information can be processed simultaneously. The reason offered (following Luria, 1966a) for this state of affairs is that these components can be identified with the functions of specific parts of the cortex (as we have previously outlined). Both the occipital-parietal and fronto-temporal areas are concerned with coding and storage of information. The planning, regulating and control of conscious behaviour is carried out by the frontal lobe, as suggested by Luria.

The model suggests that the two modes of processing information are available to the individual. The selection of either or both modes depends on two conditions: (a) the individual's habitual mode of processing information as determined by the social-cultural and genetic factors, and (b) the demands of the task.

The third component of the model uses coded information and determines the best possible plan for action. This component could be called thinking and fits in with Hess's (1967) definition of causal thinking which is described as an "integrative activity which brings simultaneous and successive patterns of nervous excitation into a subjectively meaningful frame of reference" (p. 1283).

It appears that both simultaneous and successive processing can be involved in all forms of responding. This seems to be the case no matter what the method of input presentation. Ostensibly, serial ordering of behavior may not depend either on the manner in

which information is coded or the motor aspects of the behavior itself. The output unit evidently determines and organizes performance in accordance with the requirements of the task.

Cognitive reading models. Roberts and Lunzer (1968) have developed a model of the reading process which incorporates both behavioristic and cognitive concepts within the framework of the model itself. Within this theoretical framework reading is seen as the automatization of semantic, grammatical and phonological skills. Furthermore, the development of these skills is sequential in nature with skill acquisition primarily dependent upon increasing sophistication of reading "strategies." Sequences include the following aspects: paragraph, phrase, word, letter string, and letter.

A subsequent reading model based upon information processing theory and cognitive psychology has been developed by Venezky and Calfee (1970). In this particular model, reading is conceptualized as consisting of the product of several types of processing. Generally, there are three major forms of processing: visual scanning, forward scanning and syntactic-semantic integration.

A recent study by Latham (1973) represents a combination of the theoretical insights from a number of varied sources. Principally, he has drawn from the research of Neisser (1967), Halle and Stevens (1959, 1964), and Luria (1966a, 1966b) to develop a method for analyzing the reading processes of mature readers. On the basis of his research findings, Latham concluded that the mature reader is one who, through a process of figural analysis, operating at the level of preattentive processes, separates the individual words of sentences

upon which the higher cognitive processes operate. Selection of the input for focal attention is determined by the interaction of syntax, semantics and situational clues. The reader's contribution to this process involves his own knowledge coupled with an understanding of situational influences. Then, by means of a process of analysis-by-synthesis, the reader contributes further to the process by generating hypotheses concerning the meaning that the printed text conveys and "tests" these against the unfolding linguistic pattern and situation of the sentence.

The format of Latham's research involved presenting subjects with written materials chunked in a variety of ways. Words were presented in a normal format, a two word format, a long non-meaningful format, a short meaningful format (lower major constituents) and a long meaningful format (higher major constituents). Lower major constituents were formed by applying a linguistic algorithm to the surface structure of written language, and higher major constituents were formed by combining lower major constituents. Latham found that for good college readers, formats using small or large grammatical chunks were comprehended at significantly higher levels than formats consisting of non-grammatical chunks. For the majority of poor readers, comprehension of material presented in grammatical chunks was higher than that for any format. These students read at an equivalent level when material was presented normally or in long or short non-meaningful units. Latham concluded that poor college readers probably process written language in a word by word manner. When grammatical units are delineated for them, however, comprehension

is substantially improved.

Information processing theory. In general terms, communication theory can be defined as a message transaction among participants. Although information theory may rely upon linguistic and cognitive theory as support for its basic tenets, the theory itself is concerned primarily with the total communicative process. Miller (1951) regards communication as a message involving a sequence of events (symbols) "strung together in time according to a pattern." Generally, definitions of communication are related more to the notion of process as opposed to the notion of communication as an interaction between one person and another (person).

This process view of communication is best exemplified in the classic work of Shannon and Weaver (1949) whose research was confined largely to the area of electronic communication. Basically, theirs is a mathematical representation of electronic communication. A diagram of the essential features of their model is presented in the following figure:

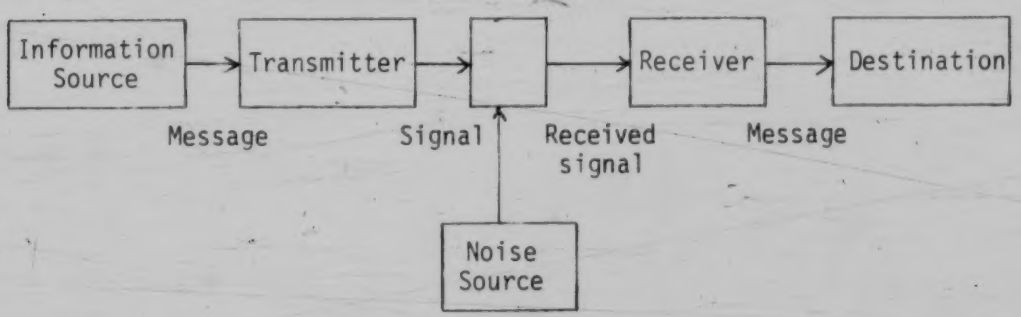

Figure 8

A Mathematical Model of Communication
(From Shannon and Weaver, 1949, p. 5)

Variations on the theme of the basic model presented above have been developed, some of which are oriented primarily to the receiver (Berlo, 1960). Generally, however, models of the communication process have been developed in such diverse areas as psychology, sociology, education, and mathematics.

Communication entails the notion that information is moved from one place to another. Whenever communication takes place, it is possible to assume that the component parts concerned with the transfer of information comprise a communication system. And although there is some variation in the specific character of these parts from one system to another, there are certain basic functions that the components must carry out if the communication is to be successful.

Simply stated, every communication must have a source and a destination for the information that is transferred, and these must be distinct in time and space. Between the source and the destination some sort of link is needed, one that spans the intervening space or time, and this link can be termed a communication channel. In order that the information can pass over the channel, it is essential to operate on it in such a way that it is suitable for transmission, and the component that performs this operation is a transmitter. At the destination a receiver is needed to convert the transmitted information into its original form. These five components—source, transmitter, channel, receiver and destination—comprise the idealized communication system. In one form or another these five components

are present in every kind of communication.[1]

It is important to note that some studies of language development incorporate communication theory into their basic theoretical framework. Thayer (1972), for example, proposes an alternative notion of the Shannon and Weaver model in order to deal with some of the difficulties inherent in a mathematical model of human communication. In Thayer's view, human communication can be characterized in the following manner:

A ------ M ------ B = X,

where A is the transmitter, M is the message being transmitted, or communicated, B is the receiver and X is the effect. Both Thayer (1972) and, subsequently Parry (1967), represent attempts to deal with the more subtle and varied effects that are an integral part of human communication and whose aspects are generally ignored in the Shannon and Weaver model.

Other investigators have, in turn, been largely concerned with the role that language plays in human communication. Wight (1976), for example, points out that language functions are often categorized in different ways, according to different schemas. As a consequence, terms such as "interaction" suggest, as a category, such verbs as "greet," "joke," "sympathize," etc. However, a category such as "express self" does not present one with the same ready-made verbal examples.

Halliday (1969) has examined the functions of language from the

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[1] It is not possible (or necessary) at this juncture to describe in detail all of the concepts which are fundamental to a complete understanding of a human communications system. For a more complete treatment of the topic as it relates to reading see F. Smith (1971, 1973).

point of view of the speaker. He lists seven major functions which he feels language serves and which bear some relationship to taxonomies of illocutionary acts developed by both Austin (1962) and Searle (1969).

Alternative views of language to those mentioned above but which are related to information processing views of language have been developed by Tough (1975) and Britten (1971). Essentially, the positions taken by Tough and Britten regarding language function have, as their main goal, the necessity of explaining how language functions to convey information as well as defining, for the listener, all aspects of the speaker's schema.

Some information processing models of the reading process. Information processing analysis makes the point that any cognitive task can be understood by analyzing it into stages that proceed in a fixed order over time, beginning with sensory input and ending with some sort of output or response. Feedback loops can be added at any point in the chain. Mackworth (1971, 1972) has produced a model based directly upon information processing theory (see Figure 9).

Mackworth's model. In the model, specific stages are labelled according to the process assumed to be taking place. The arrows in the diagram indicate the direction of the process which is, to some extent, sequential.

The basic criticism aimed at the Mackworth model is that it is a general model and, unlike Rubenstein's (1971) model of word recognition, does not lend itself to specific predictions for research.

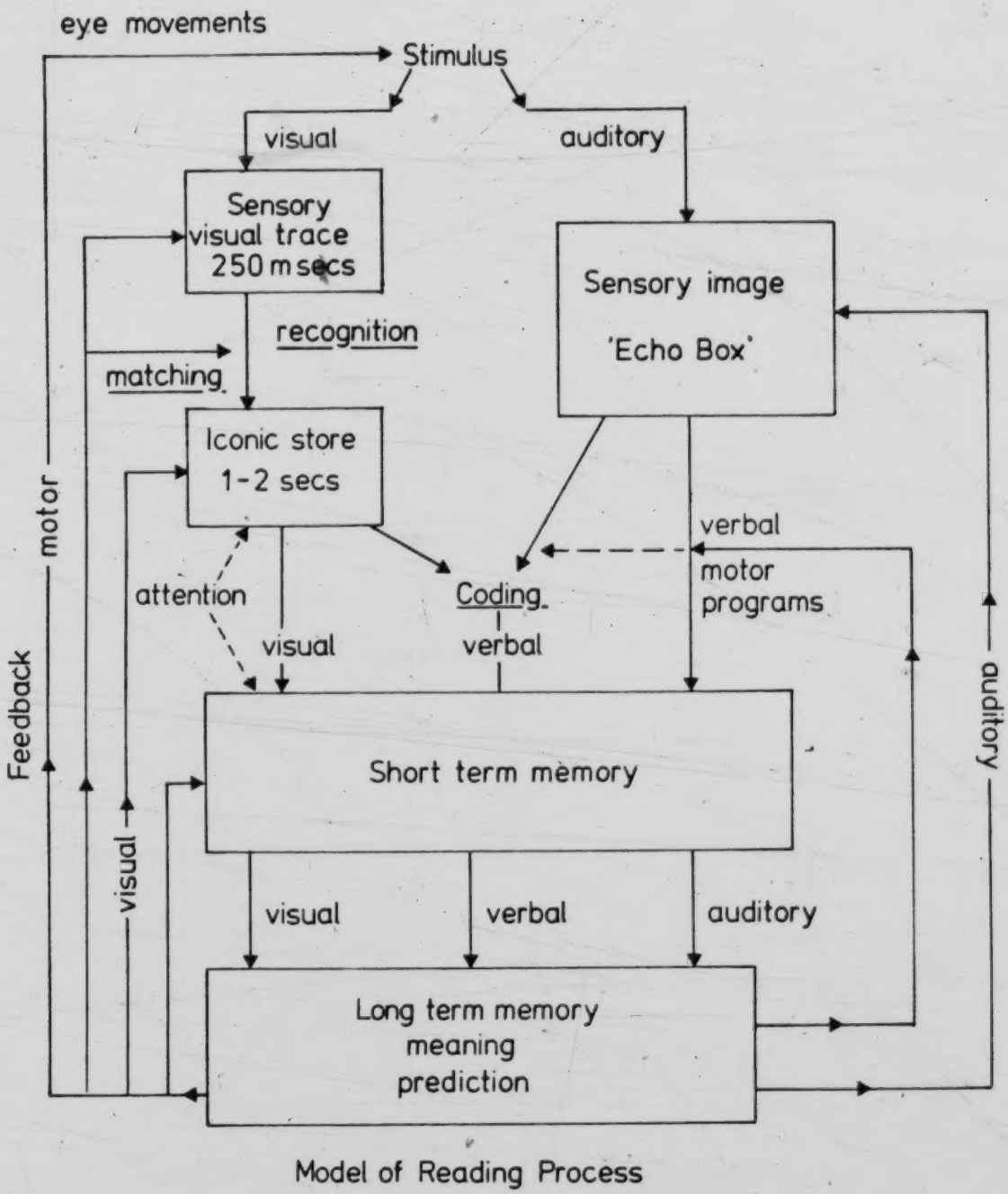

Figure 9

An Information Processing Model of the Reading Process
(From Mackworth, 1971, p. 8-74)

Other models have been developed which, like Rubenstein's model, lead to specific predictions and experiments (cf. Gough, 1972).

Gough's model. This particular model attempts to trace the reader's processing of the information on the page from the onset of the eye fixation to the production of a spoken word in split-second intervals. The word is uttered at the end of one second. In a very detailed table, the contents of each of the proposed stages of processing are specified, at 100-msec. intervals. From the point of view of outside observation it can be seen that the "reader" has rotated his eyes a few millimeters and that he has begun to move his mouth. On the "inside," a whole succession of intricate events has taken place.

In Gough's model, the visual stimulus perceived by the reader is transformed first to an icon (assumed to be a "precategorical" visual image composed of lines, curves, angles, etc.), capable of holding up to about twenty letter spaces. Its formation requires about 100 msec. and it will last about 250 msec., when new information will crowd it out. Letter recognition follows within this 250 msec. interval. Letters are identified one by one during this interval, serially from left to right, at the rate of 10 to 20 msec. per letter. Gough adds a scanner to his conceptual schema, a device which can resort to pattern recognition routines for recognition of letters, which are later deposited in a "character register." Figure 10 illustrates the process in some detail.

The question that arises with regards to Gough's model has to do with how letters get "mapped onto entries in the mental lexicon."

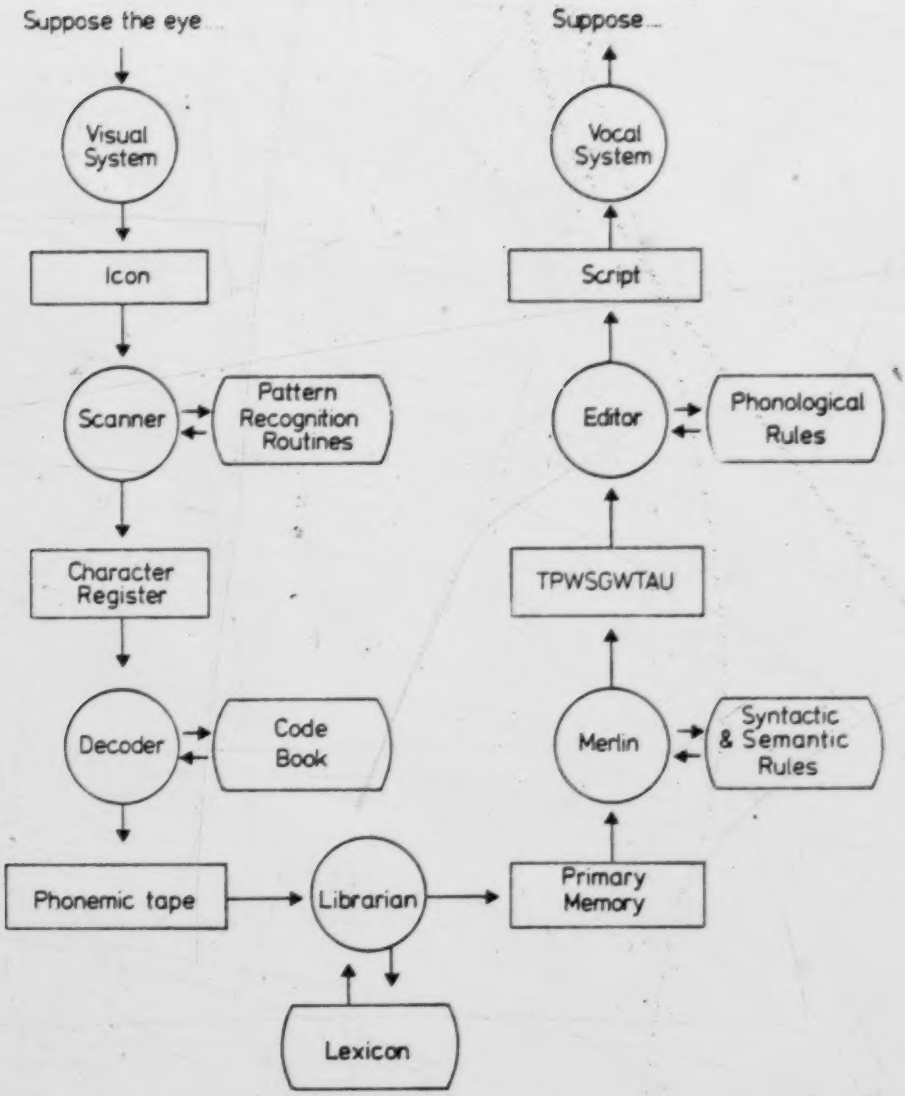

Figure 10

"One Second of Reading," An Information Processing Model by Gough
(From Gough, 1972, p. 345)

In Gough's view, characters are transposed into a string of "systematic phonemes" which are abstract entities related to phonetic segments by means of a system of phonolo ical rules. These abstract entities are assumed to give direct access to the lexical representation which is, presumably, a word. A decoder with access to a code book is provided to deal with this process.

The abstract phonemic representation is now stored on a phonemic tape to await the next process for lexical search. A librarian with access to the lexicon takes care of this, using up another 100 msec. or so.

Primary memory, in Gough's view, is the "working memory for sentence comprehension and interacts in some (as yet unknown) fashion with the comprehension device," a mysterious operator possessed with a knowledge of syntactic and semantic rules and given the name "Merlin." Hence, by the time the reader has made three fixations (about 700 msec.), enough words have gotten to the comprehension device to send them along for storage in a compartment labelled TPWSGWTAU (The Place Where Sentences Go When They Are Understood). Phonological rules are applied after this by an editor, and the script emerges as an utterance, the process of getting the first word out taking up the last 300 msec. When all inputs of the text have found their final resting place in TPWSGWTAU, the text has been read and the reading is complete.

In the model just presented, reading is seen to consist of "a sequentially ordered set of transformations." The input signal is first registered in the icon and then transformed from a character

level representation to a phonemic level representation and finally to deep structural representation. The "flow of information is from low level sensory information into ever higher level encodings." Using Rumelhart's (1976) terminology, the information flow is totally "bottom up" rather than "top down."[1] The reading process in a "bottom-up" model is strict letter by letter, word by word analysis of the input string. There is no provision for interaction within the system.

Other models have been developed which also involve a "bottom-up" process. The LaBerge-Samuels (1974) model is somewhat like the model presented by Gough, although some variation within the processes elucidated by the model is possible. Nevertheless, the basic sequence is from features to letters, to spelling patterns, to visual word representations to phonological word representations to word meanings to word group meanings. A series of stages is postulated, each corresponding to a level of analysis, in which no higher level can in any way modify or alter the analysis at a lower level.

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[1]The phrases "bottom up" and "top down" are derived from the computer science literature. Consider the tree structure diagram that represents the structure of a sentence. The completely analyzed sentence appears at the top of the diagram; the semantic and syntactical analysis comprises the middle portion of the tree, and the words, or phonetic and visual symbols of the language string, appear at the bottom. Top-down analysis starts at the top of the diagram and works its way down. Bottom-up analysis starts with the analysis of the physical inputs and tries to piece them together in order to work its way up the diagram. It is possible that both processes go on at the same time. The tree structure is, of course, highly oversimplified, and the actual processing is not so easly classified into higher- or lower-order components. Nonetheless, the analogy still provides a useful overview (from Stevens and Rumelhart in Norman and Rumelhart, 1975, p. 136).

One serious deficiency of the "bottom-up" model is that it appears to be dependent upon a fixed order of stages where the securing of information at one level of analysis is partially determined by higher levels of analysis. For example, with respect to the effect of orthographic structure on the perception of letters, it is reasonable to conclude that no model which supposes that one first perceive letters in a stimulus and then put them together in higher units can be a correct view of the reading process. The whole process of reading is of greater variation and diversity than can be explained from a "bottom-up" perspective. Hence, theories of the Gough and LaBerge-Samuels sort can survive only if they assume that partial information is somehow forwarded to higher levels of analysis and that the final decision as to which letters were present is delayed until this further process has been accomplished.

There are, in addition, other related aspects of perception which "bottom-up" models of the reading process do not account for in their explication of this process. For example, it is evident that our perception of words depends largely on the syntactic environment in which we encounter these words. Moreover, our perception of words is dependent upon the semantic environment in which we encounter them. Hence, our perception of syntax depends, in the main, upon the semantic context in which the string appears along with our interpretation of the meaning of what we read being dependent upon the general context in which we encounter the text itself. In sum, it appears that our apprehension of information at one level of analysis can often be a function of our apprehension of information at a higher

level of analysis. It is evident, then, that a strictly "bottom-up" model of the reading process is not adequately equipped to explain all that is involved in the recovery of information from the printed text.

"Bottom-up" models, as we have seen, attempt an explication of reading processes in terms of a "sequentially ordered set of transformations." As a contrast, "top-down" models operate from a radically different perspective in terms of their orientation regarding the operations of reading processes. Ruddell (1969), for example, has produced a language model which attempts to highlight the various psycholinguistic factors involved in the total communicative process.

Ruddell's model. The basic communication skills are identified on the extreme left of Ruddell's model (see Figure 11). The rectangular line encloses a hypothetical representation of the system concerned with the encoding and production processes of speech or writing and the decoding processes of listening or reading.

In terms of the model's functions, the organized sound patterns directly involve the morphemic system. At this juncture, the short-term memory component is affected, and the syntactic system begins to "chunk" the language units through the constituent structures for transformational and rewriting purposes. Following the transformation and rewriting of the sentence in its most basic form, the semantic aspect of the model is encountered, and the meanings of the various morphemes are considered through a semantic reading utilizing the denotative, connotative, and nonlinguistic dictionary components. The

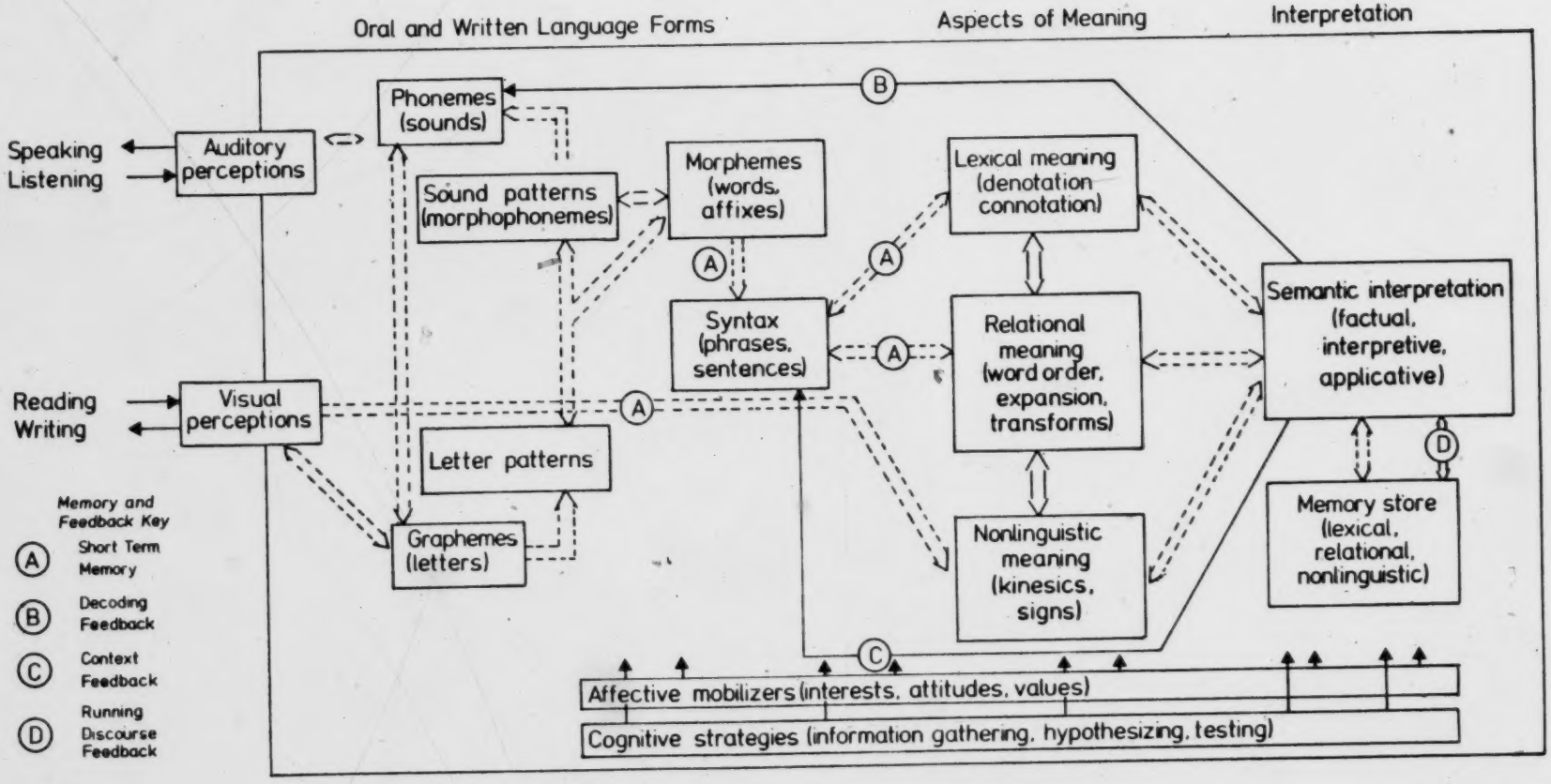

Figure 11

Systems of Communication Model
(From Ruddell, 1969, p. 72)

semantic and structural meanings are then meshed through the semantic interpretation or projection rules, and the meaning is established. Simultaneously, the appropriate semantic markers and structural markers are attached, and the semantic and structural contexts are placed in long-term memory. If at the point of semantic projection some difficulty is encountered, and if the sentence appears to be ambiguous, the reader may return to the morphophonemic level or the syntactic level to verify the surface structure realization for a specific morpheme or constituent structure as the need dictates.

As a new sentence appears in the running context, the communication is processed in the same fashion. Previous information, which is stored in the long-term semantic and structural memory component, is available for mobilization to the semantic-interpretation level to aid in evaluating the running discourse relative to the objectives established by the reader.

Goodman's model. One further example of a model which utilizes a "top-down" analysis of inputs in reading processes is that model developed by Kenneth Goodman (in Singer and Ruddell, 1976, p. 491). Essentially, Goodman's view of reading is contained within his definition of reading in which he states that reading is:

> . . . a complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language. (In Singer and Ruddell, 1976, p. 472)

Reading, in Goodman's view, is a reconstructive process, based upon a direct relationship between oral and written language. For the reader, perception in language is not simply a series of

sound perceptions or word perceptions. Rather, perception is related to the grammatical structure of the language, and to the structure of the meaning being communicated (see Figure 12).

Unlike the "bottom-up" view of reading which emphasizes accurate perception in language, the Goodman position conceptualizes reading as a sampling, predicting, guessing process. In this "guessing game" view of reading, three types of information are posited as being essential requisites to successful reading. Each information source has several subtypes and each source is used in reading simultaneously, not sequentially as is the case for "bottom-up" models of the reading process. The three types of information are: graphophonic, syntactic, and semantic. Goodman takes the position that the foregoing information sources play an integral role in the reading processes of the beginning reader, the proficient reader, and in oral reading.

In looking at both "top-down" and "bottom-up" models of the reading process, the major source of disagreement amongst the proponents of both schools of thought is related to whether or not misidentifications in reading interfere with the reader's ability to understand written material. Gough (1972) argues that "since the good reader need not guess (at words); the bad should not" (p. 354). In his view, word recognition is not influenced or determined by the surrounding words in a story; neither does the reader's prior knowledge affect word recognition. Gough maintains that the reading process is much too rapid a process for such hypothesis testing to take place.

However, Goodman (1970, 1973) implies that misidentifications

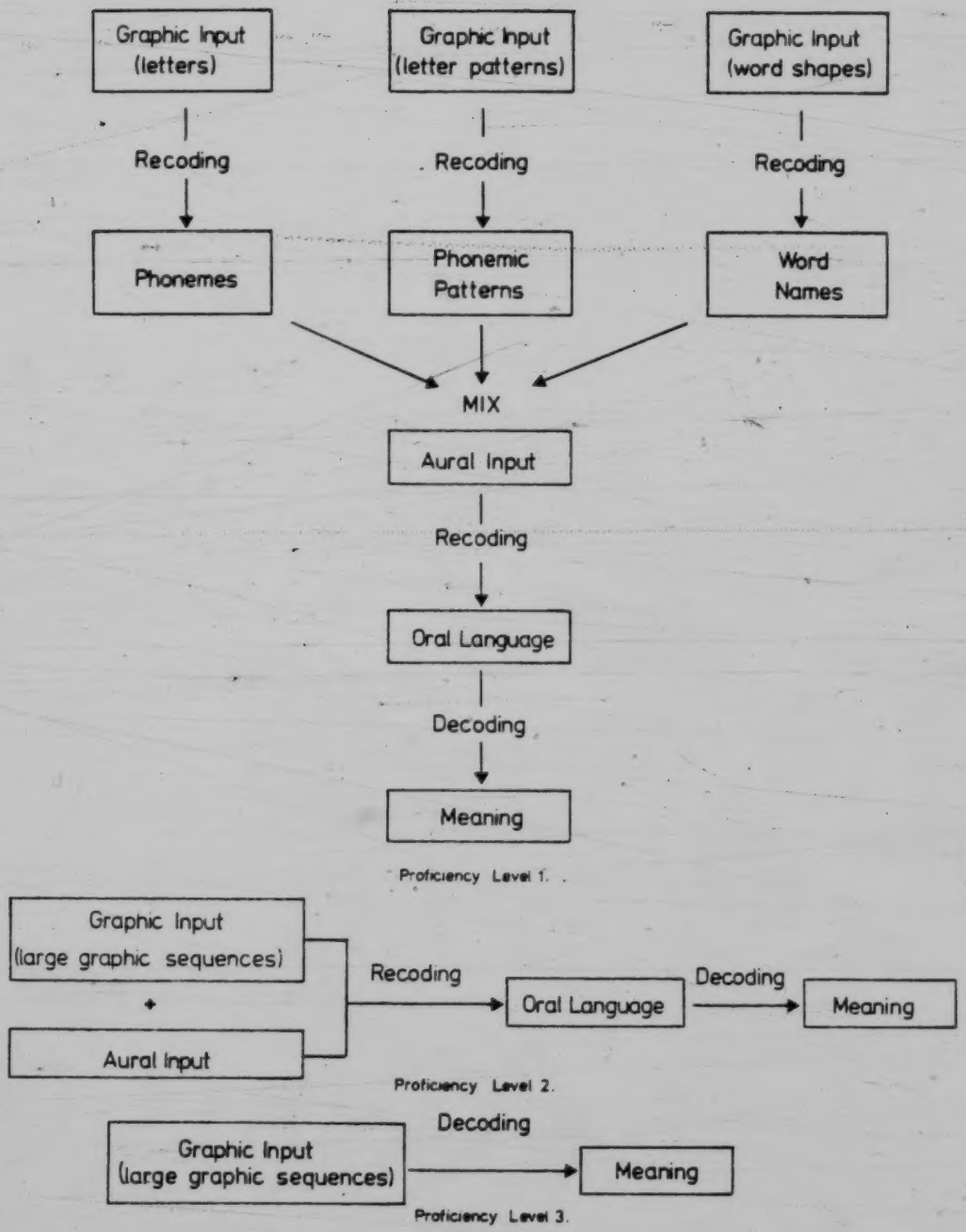

Figure 12

The Goodman Model of Reading
(In H. Singer and R. B. Ruddell, eds., Theoretical models and processes of reading, 2nd ed., 1976, p. 491)

of words may not interfere with the understanding process at all. For him, reading is an "inside-out" process (Wanner, 1973) in which the reader imposes meaning on the text. Consequently, errors made while reading would probably not be seriously considered by the reader unless they are "appropriate to the underlying representation of meaning which the reader has constructed from prior knowledge, language knowledge and from intersentential contextual information within the story itself" (Nicholson, 1977, p. 2).

The research findings from both schools of thought does not lend strong support to either position. Some studies have, for example, shown that semantically "sensible" errors are often accompanied by high levels of comprehension (Goodman and Bourke, 1973; Thomas, 1975; Recht, 1976). Conversely, there is research evidence to show that children often make numerous errors which do not make sense but which do not prevent them from exhibiting sufficient knowledge and understanding of what they have read (Biemiller, 1970; Menosky, 1971).

Evidently, then, neither the "bottom-up" nor the "top-down" models alone are able to account for all the empirical evidence available concerning how children process print for meaning. What is required is a "formalism rich enough to represent all these different kinds of information and their interactions."

An interactive model of the reading process (Rumelhart, 1976). The theoretical model developed by Rumelhart is helpful in that it represents an analysis of reading processes which utilizes both "top-down" and "bottom-up" forms of analysis as part of its framework. In Rumelhart's (1976) own words it is a ". . . reading model which makes

use of a formalism allowing highly interactive parallel processing units" (p. 2).

The theoretical basis for much of Rumelhart's model is taken from cognitive network theory. The model itself has been developed from research in three broad areas: (1) computational linguistics, including the problem of automatic translation of natural languages, (2) artificial intelligence (i.e., how can we program a computer to act intelligently?), and (3) psycholinguistics and cognitive psychology.

The first two areas are concerned mainly with computer technology and the methodology of mathematical linguistics and automata theory. In the latter area, cognitive network theory ultimately becomes a neuropsychological theory about the information processing structures supporting higher mental processes.

Rumelhart's (1976) work seems to be derived largely from the research into artificial intelligence as exemplified in the work of V. R. Lesser, R. D. Fennell, L. D. Erman and D. K. Reddy (1974); R. C. Shank and K. M. Colby (1973); and Ron Kaplan (1973). Figure 13 illustrates the theoretical aspects of Rumelhart's model.

The basic principles underlying the model state that graphemic information enters the system and is registered in a visual information store (VIS). A feature extraction device is then assumed to operate on this information drawing out, as it were, the critical features from the VIS. These features, in turn, function to serve as the sensory feed-in to a pattern synthesizer. The pattern synthesizer has, in addition to sensory information, access to non-sensory information concerning the orthographic structure of the language, information

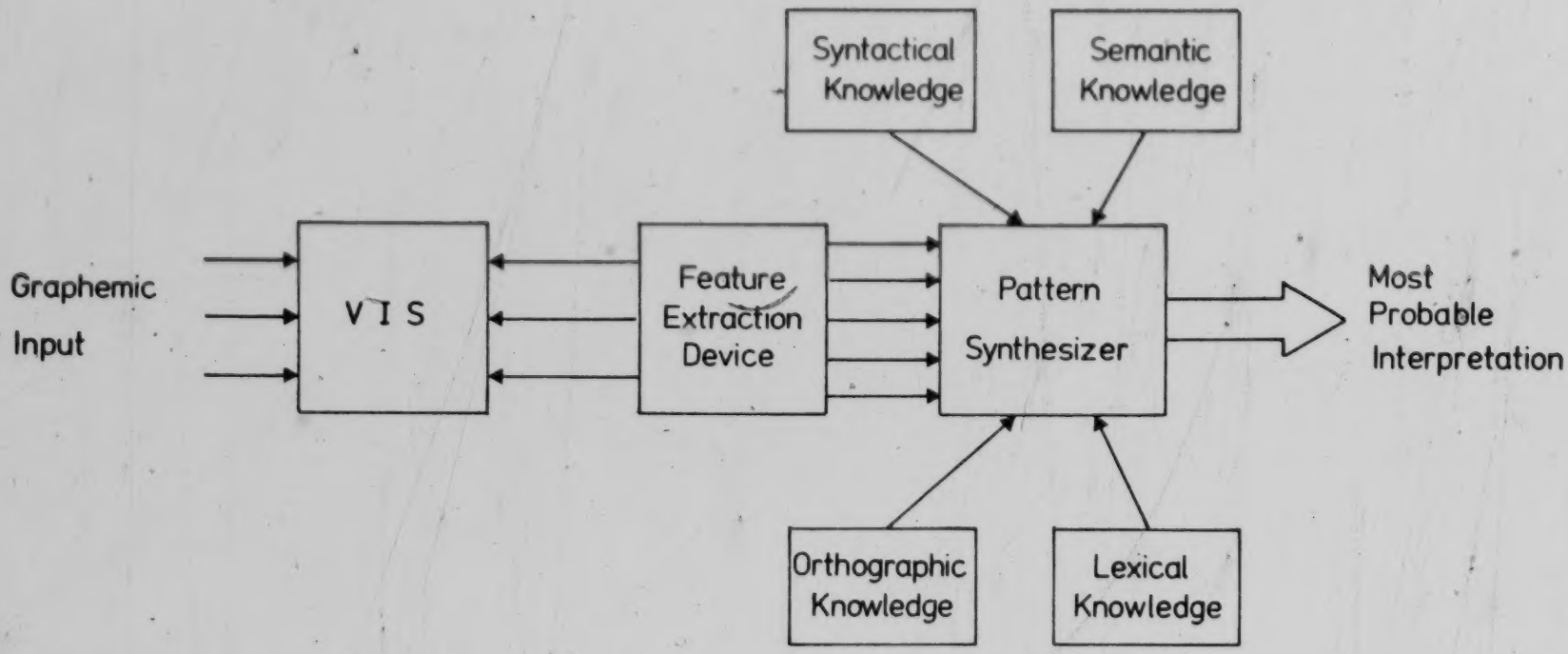

Figure 13

A Stage Representation of an Interactive Model of Reading
(From Rumelhart, 1976, p. 20)

concerning lexical items in the language, information as to the syntactic possibilities, the semantics of the language, and the current contextual constraints (i.e., pragmatic information). The pattern synthesizer, in turn, utilizes the totality of this information to arrive at the "most probable interpretation" of the graphemic input. In other words, the sum total of all knowledge sources, both sensory and non-sensory, are brought together at one place and "the reading process is the product of the simultaneous joint application of all of the knowledge sources" (Rumelhart, 1976, p. 20).

The model, as such, does not claim to be an explication of a psychologically plausible hypothesis as to how the various knowledge sources interact. The flow chart does no more than list the relevant variables. In order to deal with this problem, Rumelhart has developed a means for representing the operation of a set of parallel interacting processes.

The end result of these deliberations is a "message center" which is akin to Kaplan's (1973) notion of "chart" and the HEARSAY system entitled a "blackboard" (Lesser, Fennell, Erman, and Reddy, 1974). The message center is comprised of a set of independent knowledge sources. Each knowledge source has specialized knowledge of some aspect of the reading process. In terms of its operation, the "message center" keeps a running list of hypotheses concerning the nature of the input string. Within the model, each knowledge source constantly scans the message center for the appearance of hypotheses relevant to its own sphere of knowledge. Hence, whenever a particular hypothesis enters the message center, the knowledge source in question

evaluates the hypothesis in light of its own specialized knowledge. And on the basis of its analysis, the hypothesis may be confirmed, disconfirmed and removed from the message center, or a new hypothesis can be added to the message center.

This process is carried out until some decision can be reached with the "most probable hypothesis" being confirmed as the correct one. To facilitate this process, the "message center" is represented as being highly structured so that the knowledge sources know exactly where to find relevant hypotheses and so that dependencies among hypotheses are easily determined (Rumelhart, 1976, p. 21ff).

The message center. This area is represented as a three-dimensional space. One dimension represents the position along the line of text, one the level of hypothesis (word level, letter level, phrase level, etc.), and one the alternative hypotheses at the same level. Associated with each hypothesis is a running estimate of the probability that it is a correct hypothesis. Additionally, hypotheses at each level may have pointers to hypotheses at higher levels, or at lower levels, upon which they are dependent. Rumelhart utilizes a schematic diagram to illustrate his view as to how the message center functions (see Rumelhart, 1976, p. 23ff).

The knowledge sources. Rumelhart states that he does not as yet have a detailed model of all the knowledge sources. He does, however, discuss a number of the sources he has postulated as being an integral part of his model. These are presented below in an encapsulated form:

1. Featural knowledge. The features are extracted according to the assumptions of the Rumelhart and Siple (1974) model. Rumelhart assumes that these critical features are the basic level of processing.

2. Letter level knowledge. Feature inputs are scanned and whenever a close match to a known letter is found, a letter hypothesis is posited.

3. Letter cluster knowledge. This knowledge source scans the incoming letter level hypotheses looking for letter sequences that are likely and form units in the language, or single letters which are frequently followed or preceded by another letter (e.g., as q is frequently followed by u). For this knowledge source, the most probable hypotheses that are unsupported from below or that support no higher level hypotheses are evaluated first.

4. Lexical level knowledge. This knowledge source scans the letter cluster and letter hypotheses for letter sequences which form lexical items, or which are close to lexical items. When it finds such information it posits the appropriate lexical level hypotheses and any additional letter cluster or letter level hypotheses.

5. Syntactic knowledge. Like the other knowledge sources, this one is designed to operate at both the 'top-down' and 'bottom-up' level. That is, whenever a lexical hypothesis is suggested, one or more syntactic category hypotheses is entered into the message center. Those categories which are most probable given that lexical item would be entered first. At the same time that lexical categorical hypotheses would be scanned for phrase possibilities, the syntactic knowledge source would have the capacity to operate in a "top-down" fashion.

6. Semantic level knowledge. Whenever strong lexical hypotheses occur, this knowledge source is assumed to have the ability to look for semantic level correlates to evaluate the plausibility of the hypotheses (at both the lexical and syntactic levels).[1]

Rumelhart's model represents an important development in the area of information processing models of the reading process in that it is one of the few representations of reading as an interactive

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[1] For a more detailed analysis of knowledge sources see Rumelhart, 1976, pp. 29-32.

process. The uniqueness of the model is its ability to account for perceptual aspects of the reading process by dealing with such aspects as features, letters, word clusters and syntactic factors. At the same time, the model is able to take into account such "top-down" aspects of reading as the interaction of syntax and semantics in getting meaning from the printed page. By emphasizing the interactive nature of reading, Rumelhart is able to make the claim that reading processes are not tied to a stage-dependent view of reading. Rather, it is possible, within the constraints of the model, to enter the reading act at whatever level the task demands, whether that level be features, letters, words or semantic constraints.

Philosophy. Before proceeding to a general review of all that has been said to this point, some note must be taken of recent philosophical contributions to reading theory. Generally, philosophers have not concerned themselves specifically with problems of reading. Basically, the thrust of philosophical writing has been in the area of language and language use. Conversely, linguists and researchers in the field of child language have taken a special interest in the writings of contemporary philosophers such as Grice (1957) and Searle (1969, 1975).

In the field of reading methodology, Stern's (1971) analysis of the term "reading comprehension" represents a departure from the traditional approach in that, for the first time, reading definitions were analyzed using a methodological procedure that is exclusively philosophical in its orientation. The only other researcher who has devoted an ongoing interest in the work of philosophers has been

Jenkinson (1976).

One of the few philosophers who has taken a close look at the field of reading is J. F. Ross (1974). In a recent article, he subjected the term "reading" to a thorough philosophical analysis. His basic conclusions were: (1) that there cannot be a general definition of reading; (2) that the "focal" senses of "to read" indicate that reading is a form of linguistic perception carried out through the exercise of general linguistic abilities, adapted to a visual input of inscriptions with inherent linguistic meaning, so that differential linguistic perceptions, thus stimulated, correspond with objective meaning contrasts; (3) that "word recognition," exhibiting the same ambiguity as "to read" can be analyzed in its focal senses as "the determination of the resultant (apprehended) meaning in accord with and in dependence upon the objective meaning of the message unit"; (4) that "to read" can be reductively analyzed in terms of linguistic abilities which are not specific reading abilities; (5) that there are neither specific reading abilities nor specific reading disabilities; (6) that presently available information concerning perceptual development, linguistic skills, reading defects and deficiencies can be incorporated within the conceptual paradigm proposed by Ross (1974).

The conclusions reached by Ross suggest that reading can be reductively analyzed to the extent that reading be considered a subset of general linguistic functioning. Hence, reading is conceptualized as part of the total language process without any particular features which would make it a unique process. Such a view is at odds with

Walker's (1973) findings and with Latham's (1973) view that reading is a language process which utilizes distinct processes in analyzing print for meaning. Generally, the basic criticism which can be offered of Ross's view of reading is that it is based upon a reductionist view of the reading process. Hence, although reading is an integral part of the total language process, it does possess some attributes which set it apart as a perceptual, cognitive and linguistic process.

In Ross's view, there are as many senses in which a person may be said to be able to read as there are senses in which a person may be said actually to read. And it is reading ability which is the objective of education in the teaching of reading; the active capacity, along with the disposition to its exercise, to process the text visually to a "reading output." However, reading ability is not directly accessible for examination. It is accessible only through its exercise, only through the activities which constitute reading. Furthermore, such activities can be largely or wholly internal to the reader and are not necessarily available to observation or even to introspection (Ross, 1974, p. 120). Reading, in Ross's view, is a transitive activity; it has a product, whether it be a letter sound, a word sound, a sentence meaning, a belief or other epistemic attitude or affective state. Hence, while there is no direct access to reading abilities or activities, there is access to output-manifestations and it is these activities which are amenable to categorization and subsequent study.

IV. SUMMARY

In the course of this investigation, a number of theoretical viewpoints regarding the nature of the reading process have been examined. Included within this examination was a detailed review of a number of relevant "sources of knowledge" for a theory of reading.

Attempts to relate theoretical viewpoints from reading processes to a general theory of reading acts which incorporates philosophical theory are complicated by the disparate nature of the two concepts. Essentially, the basic notion of process suggests a dynamic, on-going state of affairs, undifferentiated and entailing no notions of rest or terminal points. The concept of act, or action suggests, on the other hand, a disposition of human behavior towards an overt state of affairs. That is to say, an act entails a definite starting and ending point whereas the notion of process need not.

Hence, the notion of process as it applies to reading suggests an ongoing state of affairs (or perhaps an underlying state of affairs). In this respect, reading processes may be viewed as processes which are subsumed under a general theory of action or, in other words, a general theory of reading acts. The foregoing, then, represents an important distinction to be observed between a general and a special method as it is applied to acts of language. As Bosley (1978) says,

> A general method is applicable to any act or activity; a special method is applicable only to some . . . there is a general method, application of which helps to account for and to criticize acts and activities of language. Insofar as one applies a general method, one acknowledges

> no distinction between, for example, a conversation and a novel. (pp. 83-84)

The distinctions being made between a general method (i.e., the notion of act) and the notion of a special method (i.e., that of process) represent important philosophical distinctions with respect to this investigation. They represent important distinctions in terms of sorting out the place that theories of the reading process have within the general framework of a theory of reading acts.

The foregoing is not meant to imply that there are no essential differences between speaking a language and reading a language. Rather, the argument being presented is against the belief that reading acts are formally and functionally distinct from other kinds of utterances.

A general theory of reading acts should, therefore, be the logical outgrowth of a general theory of speech acts. And in like manner to the concept of speech acts, reading acts can be conceptualized as an account of a kind of reciprocity realized in a conversation between two or more people. Moreover, this account has been built upon the work of ordinary language philosophers such as John Austin, John Searle, H. P. Grice, and others.

In keeping with the general method espoused above, a basic framework for language functioning is postulated. Support for this general method of communicative functions is available (cf. Fillmore in Rosenberg and Travis, 1971; Halliday, 1973; Hymes, 1974; and others), so that the choice of paradigms is arbitrary. In terms of this discussion, Baker's (1976) "information structure" view of language is appropriate in that it provides an over-all framework

within which the general theory of speech acts may be grounded and upon which a general theory of reading acts may be realized. The underlying rationale for this view is that the one really invariant property of language is that property related to its use, which is to communicate. In other words, no matter what variation one may observe in the lexicon or syntax within a system of communication, the basic function of language remains the same—to convey information.

Hence, once a basic framework for communication has been agreed upon, of which speech acts and reading acts are an integral part, a basis will have been established for taking into account all of those special features which contribute to the total communicative act. The possibility would then exist for building links between speech acts and reading acts by noting those general features which contribute to the two areas of functioning and by speculating as to the nature of those processes which underly speech acts and reading acts.

Having, therefore, subordinated the notion of process to a discussion of general method of inquiry as to the nature of reading acts, it should now be possible to bring back into consideration the notion of a "linguistic edifice" of several levels of domination and subordination. Essentially, what this view entails is the assumption that there is a method applicable to the lowest levels of any linguistic edifice: first to that of uttering or writing words in succession, and then to that which dominates such acts of utterance or writing to produce grammatical units.

With this framework in mind, it opens to the researcher the

possibility of considering what the possible links are between speech acts and reading acts. Such speculation is possible, keeping in mind the view that reading acts represent an integral part of the total communicative process. As Anderson writes,

> . . . the meaning of a communication depends in a fundamental way on a person's knowledge of the world and his/her analysis of the context as well as the characteristics of the message. By "meaning" we intend the full sense of this term including sense, reference, truth value, illocutionary force, perlocutionary effect, and significance. The scope of "context" ranges from local linguistic constraints—for instance, gambler's pick (choice or selection) and miner's pick (ax-like instrument)—to the physical and social milieu of an utterance. (Anderson, 1977, p. 368)

CHAPTER VI

SPEECH ACTS AND READING ACTS: SOME BASIC RELATIONSHIPS

I. INTRODUCTION

The underlying assumption being advanced herein is that a method which is characteristically employed to account for the use of language in a general sense (i.e., a general theory of speech acts) can also be employed as an adequate account of a general theory of reading acts. Correspondingly, in the development of this account, cognizance will have to be taken of those specialized features of language which mark the differences between language as speech and language in its written form. That is to say, a careful analysis is required of the comparative and contrastive features of both speech and writing systems in order to clearly explicate the essential relationships which hold between speech acts and reading acts.

In delineating the basis of this relationship, some provisional statements are required regarding the necessary limitations to a discussion of this nature. The first of these provisos is that the study of speech acts and reading acts represent two somewhat disparate approaches to the investigation of language functioning. Speech acts, a theoretical notion regarding the essentials of language as act, has been the subject matter of ongoing debate by ordinary language philosophers. Reading acts, as a theoretical platform which attempts to unite conceptual viewpoints from ordinary language philosophy with

those of psychology, linguistics, information processing theory, and related disciplines, can only be regarded as an attempt to meld varying viewpoints into a logically consistent framework for analysing reading as an active disposition for securing meaning from print.

Within the chapter, emphasis will be given to the investigation of a general theory of language as it is used in communication. By placing the study of reading acts within the context of a general communicative framework, provision will have been made for an analysis of the relevant "sources of knowledge" which contribute to the basic aspects of the reading process. Moreover, attention will have been given to relating linguistic, psycholinguistic, psychological and information processing theory to a general theory of reading, and to philosophical considerations concerning the interplay between language and thought (or meaning) as it is stated in a general theory of speech acts.

Linguistic theory, as a discipline concerned with language structures, deals primarily with systems of natural language. That is to say, it deals with their actual or possible structures, social function, and so on. Such systems are usually realized as systems of conventional rules determining language behavior as it reveals itself in the use of verbal utterances within communicative settings. The rules are conventional in that they are generally shared by most members of a linguistic community. These rules are known implicitly and members of the community are able to use them to the extent that verbal utterances may count as being determined by a particular language system of a community as it is cognitively acquired by the

individual language user. The basic purpose of a grammar is to provide a theoretical account of such a particular rule system. Consequently, a grammar is generally characterized as a theoretical form-meaning rule system: it must also explicate the manner in which morpho-syntactic structures are related to semantic structures.

In this regard, a basic assumption is that the theoretical reconstruction of utterances at the levels of form and meaning should be complemented by a third level, namely that of action (van Dijk, 1977; Wittgenstein, 1957; Ryle, 1961). As van Dijk (1977) states:

> . . . an utterance should not only be characterized in terms of its internal structure and the meaning assigned to it, but also in terms of the act accomplished by producing such an utterance. (p. 2)

Hence, there is adequate reason to characterize a grammar as form-meaning-action rule system, in which abstract forms of utterances are related to both the meaning and function of the forms in theoretically reconstructed contexts of communication.

Correspondingly, one of the primary interdisciplinary studies of discourse is psycholinguistics, of which information processing theory is a part. Theoretical and experimental studies are currently being conducted regarding the cognitive processes of discourse production, comprehension storage and reproduction.

A grammar, as a form-meaning-action rule system, is faced with the task of providing an explanation as to why the object-utterance is acceptable. Speech act theory, on the other hand, is faced with the need to provide successfulness conditions for the utterance-act, and to explain in what respect such an act may be a component in a course of interaction which is subject to acceptance or rejection by

another agent.

Pragmatics, as a related discipline, is also faced with the task of "placing" these acts in a situation, and of formulating the conditions for stipulating which utterances are successful in which situation. What is required, in this regard, is an abstract characterization of this situation of speech interaction. The technical term for this is that of context.

To this point in time, research in the field of reading placed its primary emphasis upon the meaning of words and latterly upon sentence meaning as the determiner of "contextual" comprehension. In this respect, the research basis for these views appears to have been drawn from the early work in psychology on word meaning and the later work on sentence meaning by linguists (Chomsky, 1957, 1965). Recently, however, there has been a definite interest created in the area of discourse comprehension and meaning (McLeod, 1978; Schank, 1975; Miller, 1976).

II. THE NATURE OF THE CODE

A detailed analysis of the nature of the code would require an examination which is beyond the scope of this investigation. Hence, what will be developed here is a format for comparison; a basis upon which comparisons may be made between the spoken and the written code.

The concept of "code" within speech is founded upon the notion that speech is intentional, that it possesses both structure and meaning. However, it is evident that the meaning conveyed by speech

does not reside in the code. As Wittgenstein (1957) emphasises in his Philosophical Investigations, meaning as it arises in the spoken word, is a function of its use in the language.

The notion of code can be seen as the mechanism whereby meaning is facilitated or realized in a conventional form. The spoken or written code, then, is thereby subordinated to the main or basic relation in language, which is to communicate with one another (or with oneself).

Whenever the notion of code arises, attention is immediately drawn to that which constitutes the basic unit of speech. Difficulties arise at this juncture, especially if the notion "unit of speech" is tied to "unit of meaning." Basically, it can be assumed that the fundamental unit of speech perception is the phoneme. In more precise terms, the unit of analysis in phonetics is the phone. In theory, therefore, a detailed phonetic record would enable a skilled phonetician to "read off" the language.

Every language possesses a finite number of sound contrasts which serve to keep words separate and clear of confusion. This inventory of sounds is much smaller than all the phones that a speaker may potentially say. Sound units which actually distinguish between utterances are phonemes. In English there are about forty phonemes which make up the sound system of the language.

In the view of some linguists, the phoneme is capable of being analyzed into bundles of distinctive features (Chomsky and Halle, 1968). This notion is consistent with the view that the child's acquisition of the phonemic system of his language involves successive

contrasts in the distinctive features which are descriptive of particular phonemes.

Syllables, as units of speech in language development, can be conceptualized as higher-order units in word perception, and as initial units of reading instruction in the discussion of syllabic writing systems (see Gibson and Levin, 1975). Syllabication appears to be more a matter of style and spelling convention than of linguistic theory. Psychological research into the nature of the syllable as a perceptual unit has been conducted by Savin and Bever (1970), and by Foss and Swinney (1973), amongst others.

Morphemes, which linguists describe as the smallest meaning-bearing units in the language, are realized by contrasting units of content in words rather than by minimal contrasts of sound. Some descriptions of morphemes suggest that they are phonemes which have content. For example, consider the word book compared to book(s). In its singular form, the word can be considered a single, unbound morpheme which can be understood as a meaning-bearing unit which is not capable of further subdivision into other (meaningful) units. The plural books contains two meaningful elements, book and s, with the s marking the notion of more than one. Morphemes may also be subclassified as free or unbound (e.g., book) and bound (e.g., s is a bound form which means "more than one" and cannot stand alone).

The English language has a reasonably simple morphological system (see Gleason, 1961 or Abercrombie, 1967). By way of contrast, however, the field of morphophonemics is a much more complex area of study, one that has not yet been fully worked out in English (cf. Francis, 1958).

In addition to the foregoing, linguists have also identified an area of language to which they have given the name "suprasegmental phonemes." Essentially, these are patterns of stress, pitch, and rhythm which help to distinguish such aspects of language as sorting out the distinction between, for example, the noun "con' vert" from the verb "con vert'."

Now although the phoneme is characterized as the basic unit of analysis in speech, it does not represent the limit of linguistic analysis. Phonemes themselves may be distinguished from one another on the basis of certain distinctive features (cf. Neisser, 1967), which may be regarded as the elementary components of speech (cf. Jakobson and Halle, 1956). In this respect, nearly all the distinctive features of speech are binary: every speech sound is either voiced or voiceless, nasalized or non-nasalized, tense or lax, etc.[1]

The notion of distinctive features is, nevertheless, not a clear-cut explanation of the elementary components of speech. As Neisser (1967) points out, the concept of distinctive features does not adequately explain the basic question regarding the constitutive nature of distinctive features. Jakobson and Halle (1956), for example, argue that the elementary pattern underlying any grouping of phonemes is the syllable. Hence, it would appear that in the acquisition of speech, syllables would follow phonemes and these would, in turn, be followed by units of increasing size and complexity (i.e., morphemes, words, phrases, sentences, and so on).

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[1] For a more complete description of this position see Neisser, 1967, p. 181 ff.

Perhaps the one conclusion which can be arrived at in analysing speech codes is that there is no unit of fixed size upon which speech perception depends. Consequently, the nature of the (speech) code is, in many respects, difficult to determine.

Recently, there has been some speculation on the part of linguists regarding the nature of the code. It is well known, for example, that studies of syntax have been ongoing since the time of Fries (1952). Since that time, the development in studies of syntax has progressed from analysis of the sentence as a unit of investigation to the development of phrase structure rules, transformational grammar (Chomsky, 1957, 1965) and case grammar (Filmore, 1968). Chomsky's concept of syntax is built upon the notion of the speaker as possessing an innate linguistic competence, that there are underlying linguistic structures which become realized in spoken utterances, and which represent the speaker's linguistic performance.

Fillmore, on the other hand, has developed a theory of language based upon a case grammar of English and which attempts to combine syntactic and semantic features of the language. He states:

> The case notions comprise a set of universal, presumably innate concepts which identify certain types of judgments human beings are capable of making about the events that are going on around them, judgments about such matters as who did it, who it happened to, and what got changed. (Fillmore, 1968, p. 24)

It is important to recognize that part of the framework for analyzing language from the viewpoint of transformational grammar is based upon the concept of "rules" for effecting the transformation of utterances from deep to surface structure. Generally the view of language as "rule-governed form of behavior" is a view currently

being espoused by J. R. Searle (1969). In fact, Searle (1972) suggests that one of the basic goals of philosophers and linguists should be to graft the study of syntax onto the study of speech acts. In other words, the careful explication of the rules governing language use should lead to a fuller understanding of the spoken word and, latterly, the written word.

Correspondingly, while the nature of the spoken (speech) code can be analyzed in terms of its system of sounds (i.e., phonological rules), such analysis in and of itself does not delineate the basic units of speech which aid in the communication of meaning. Furthermore, while an analysis of grammatical structures from the viewpoint of generative transformational grammar may help us to understand the grammatical structures employed by a speaker of the language, the theory itself does not help to explain how communication of meaning is carried out between speakers of the language. Conversely, the view of language as a "rule-governed form of behavior" does suggest that the communicative process may utilize certain agreed-upon rules between participants in a message transaction in clarifying the meaning of intended messages within a communicative context. Some of the "rules" for getting conversation "off the ground" have been formulated by Grice (1957), Searle (1969), and others.

What the foregoing analysis has provided is an overview of some of the basic features of the spoken code. The written code, while sharing some of the important aspects of the spoken code, possesses some unique attributes which are worth noting.

In the first instance, the design characteristics of writing

systems are unique in that an exception can be found to any characteristic. For example, the following observations are representative of writing at the graphic level only and should be considered to describe the graphic display without considering the relationships of the graphs to sound or to other characteristics of spoken language. Briefly these are as follows:

1. Writing is formed by tracings on a surface.
2. Writing is rectilinear. It is composed of lines of print which are parallel to each other.
3. Writing is unidirectional. Current writing systems are predominantly left to right.
4. Writing has a fixed orientation.
5. Writing is patterned. Graphic distinctive features—horizontal, diagonal, curved, open-closed—combine to form letters which in turn form clusters, syllables, words, phrases, sentences, paragraphs, etc.
6. Writing has gaps (or spaces) in the graphic display. The smallest gaps separate letters, larger ones, words, then sentences, with the largest gaps being paragraphs, which involve a gap at the end of a line and an indentation at the beginning of the succeeding line.
7. Written units are roughly equal in size.
8. Writing has various forms that are not usually mixed. A text may be handwritten, typed, printed, cursive, capitals and lowercase, etc. (From Gibson and Levin, 1975, pp. 165-167)

Size of type and space between lines does make a difference in the efficiency with which adults read. These factors, on the other hand, evidently have little or no influence on children's reading. Moreover, there are a number of occasions when writing is more informative than speech, especially in clarifying the meanings of homophones (words that are pronounced alike but differ in spelling and meaning).

In this respect, it is important to note the correspondence between orthography and spoken language. Reading acts involve paying some attention to the printed page. The written message consists of a visual array to which attention must be directed, especially to selected aspects of that visual array. For example, Venezky's (1967) research indicated that there were sixty-five letter groupings which operate as graphemic units in written English. Gilooly (1970) stated that there are a number of correspondence rules in operation during reading. To illustrate, one of the "rules" has to do with mapping graphemes onto morphophonemic forms.

Another of these correspondence rules is based upon Chomsky's (1965) notion of lexical representation, which involves "vowel shifting in the English language" and from which certain words achieve generality. "Invite" and "invitation," for example, adopt a basic rule of correspondence which generalize to other words (e.g., recite and recitation).

One other rule of correspondence which has been observed in the language has to do with the development of graphic units. In this instance, the progression is from relatively small units (i.e., graphemes) to units of increasing size and complexity.

In examining the distinctions between the spoken and written word, it is important to recognize that speech is a spoken, expressive medium of communication with distinct styles of address. Spoken discourse, as such, is frequently incomplete, fragmentary, full of mazes and false starts, and interspersed with repetitions, hesitations and stammerings. However, in a conversational setting, part of the

meaning of an utterance resides in the shared situation or context of the communication (see Rommetveit, 1971). The extra-linguistic signals of gesture and facial expression further help the listener to understand what the speaker is saying. A conversation is, therefore, a shared experience in which the participants interact with one another to exchange viewpoints, to argue, commiserate, and to carry out the myriad of social activities for which humans are noted.

Forms of address in spoken discourse are related to the socio-cultural contexts of the participants in their respective dialogues. Moreover, there are certain formal modes of address which involve a speaker to audience orientation. Examples of these formal conventions are such activities as lectures, addresses, recitations, sermons, and so on.

Written codes, on the other hand, being separated in time and space from the situation itself, require a much more consistent internal structure as the text alone carries most of the meaning to be conveyed. Olson (1977) refers to the spoken code as "utterance" and to the written code as "text." In his view, utterance and text may be contrasted at any one of several levels: the linguistic modes themselves—written language versus oral language; their usual usages—conversation, story-telling, verse and song for the oral mode versus statements, arguments, and essays for the written mode. Their respective summarizing forms—proverbs and aphorisms for the oral mode versus (written) premises, and the cultural traditions established around these modes—the oral tradition versus a literate tradition—all point to contrasts between the two modes.

Ostensibly, proverbs and aphorisms are to be found in written form along with the more formal essays. Generally, Olson's argument is that there is a transition (historically, perhaps) from utterance to text which involves increasing explicitness of usage wherein written language is felt to carry most of the meaning to be conveyed, and where the written text is increasingly able to stand as an unambiguous or autonomous representation (Olson, 1977, p. 258). The forms of written language do appear to have distinctive lines of demarcation. Generally, literary forms consist of novels, short stories, plays and autobiographical sketches, amongst others. Non-fictional writings, on the other hand, are essentially content or subject-oriented (i.e., writings in the fields of the physical sciences, history, social sciences, etc.). And, in addition to the foregoing, there are the highly specialized writings of formal logic and computing science.

In producing a written text, the writer must make full use of his knowledge of the spoken word. Vygotsky (1962) conceptualizes the essential characteristics of writing in the following manner:

> It is addressed to an absent person who rarely has in mind the same subject as the writer. Therefore it must be fully deployed; syntactic differentiation is at a maximum; and expressions are used that would seem unnatural in conversation. (p. 142).

The written text is, therefore, the repository of the writer's intended message. So construed, its form should be such that it will faithfully represent its message as intended by its author. The written text should thus exhibit explicitness, should generally be logically constrained or proceed in a sequential manner subject to

the constraints imposed upon it by the writer and the nature of print itself.

The writer is, therefore, subject to the constraints imposed by the very nature of print itself. Print, with its linear and sequential qualities, forces the writer to subject his messages to the conventions of spoken and written language. Consider, for example, Gertrude Stein's "As a wife has a cow a love story. As a love story, as a wife has a cow, a love story." In Bosley's (1978) view, writing the words (of the poem by Miss Stein) has not been brought under elementary control. He writes:

> Miss Stein flouts elementary and general principles of coordination and continuance with development. (p. 91)

The reader, by way of contrast, must employ a variety of (cognitive) strategies in order to secure "uptake" from the printed page. Such processes are, by their very nature, not accessible to the observer; they must be inferred. As a consequence, some researchers have characterized the reading act as a passive process, preferring to refer to speech as an active process. It would seem, however, that the use of the term passive to describe reading acts is somewhat misleading. Certainly the reading act is a receptive process, an act which is not the overt, oral productive process which characterizes speech acts and some aspects of oral reading. Nevertheless, it is evident that all reading processes are characterized by a highly active cognitive state wherein attention and perception are at an involved level of motivation, if not at a high level of motivation. Moreover, reading acts can be represented as highly active (or interactive) processes which make optimal use of linguistic, psycholinguistic

and cognitive factors in obtaining meaning from print.

In sum, there appear to be a number of useful comparisons which can be made between speech acts and reading acts regarding the essential nature of their respective methods for the transmission of meanings and messages. Gibson (1972) has summarized a number of these comparisons in the following manner (see Figure 14).

III. THE NATURE OF THE MESSAGE

The foregoing discussion of the nature of the code provides the basis upon which a subsequent discussion of the nature of the message may be extended. The relevant point to this discussion has to do with the relationship between code and message within the total communicative setting.

Such a relationship between spoken and written messages appears to be differentiated primarily on the basis of meaning. Messages, whether spoken or written, are transmitted for a purpose with the nature of the code determining the kind and quality of the message being transmitted. Consequently, there is a need to examine some of the essential characteristics of the message in order to see where the basic differences between speech acts and reading acts are located.

Context

The basic notion of context is related to the previous discussion concerning the role of pragmatics wherein speech acts and readings cannot be analyzed in isolation. Rather, such "acts" are to be found in formal or informal settings as part of what van Dijk (1977)

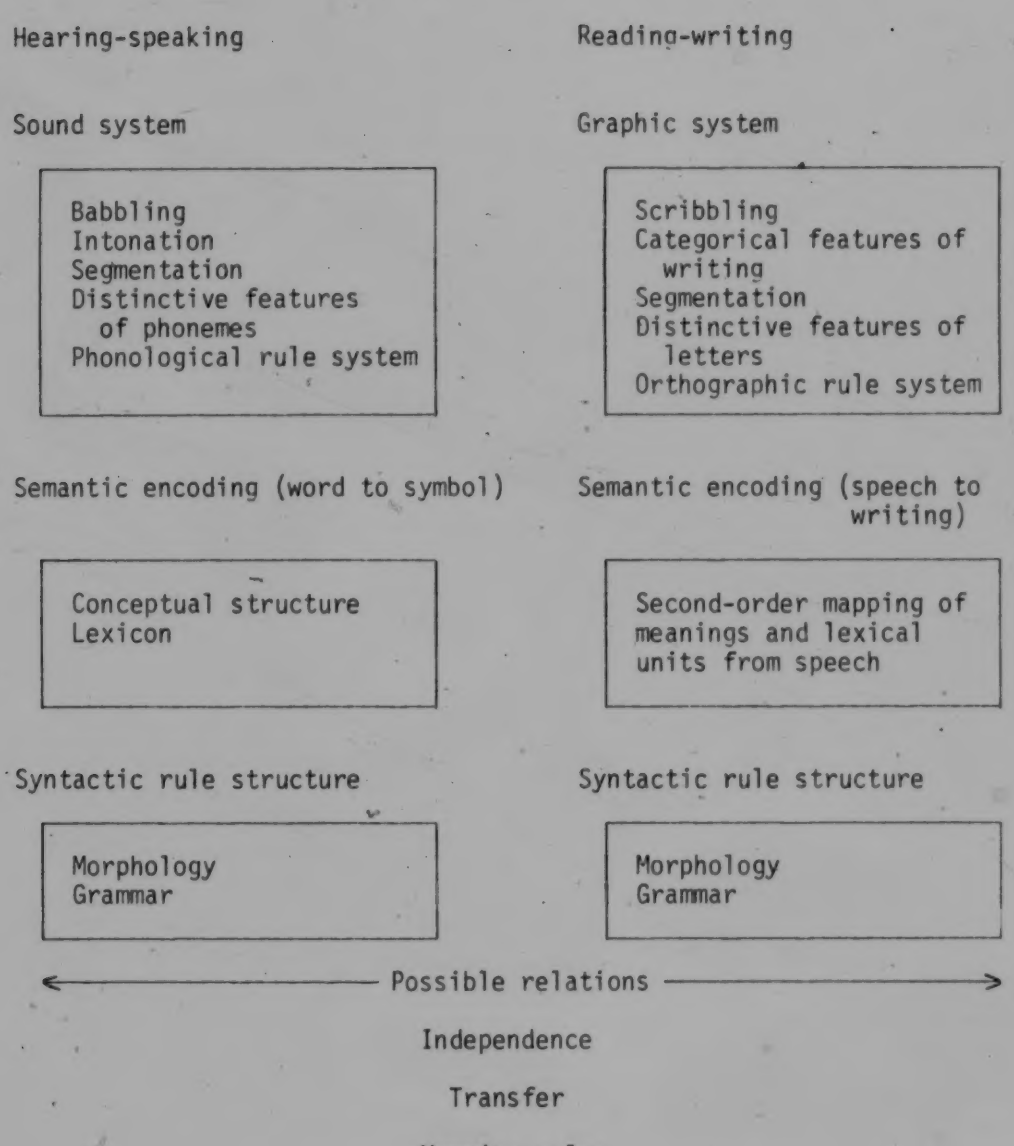

Figure 14

Some Parallels between Hearing-Speaking and Reading-Writing
(From Gibson, 1972, p. 9).

calls the situation of speech interaction.

Within the communicative matrix, there are at least two individuals, one an actual agent, another a possible agent (i.e., a speaker and a hearer). Both participants within the matrix are part of a speech community (i.e., a group of persons with the same language and related conventions for communication). The coordination of activities of two (or more) members of the community results in a speaker-produced utterance, after which the hearer may become the agent-speaker and produce an utterance (or, on the other hand, s/he may become solely an agent and accomplish a certain number of actions).

Baker (1976) employs the term "communicative setting" to illustrate the major concepts which comprise human communication. His schematization of human communication (see Figure 15) is not intended to represent a model of the communication process, nor of speakers or hearers. In his view, it is not a process model. Rather, Baker feels that the figure should be viewed as a compilation of all those variables which are felt to be critical to the communication of meaning. In terms of Rumelhart's (1976) schematization, the phrase "communicative situation" should serve to remind one that the interactive aspect of reading must take into account such variables as the current state of the speaker's (writer's) mind, the utterance (i.e., the text), and the current state of the hearer's (reader's) mind. The relevant distinction to be noted here has to do with the nature of the discourse itself. In this regard, van Dijk's (1975) distinction between natural narrative and artificial narrative is relevant in that it helps to clarify the distinction between artificial language and

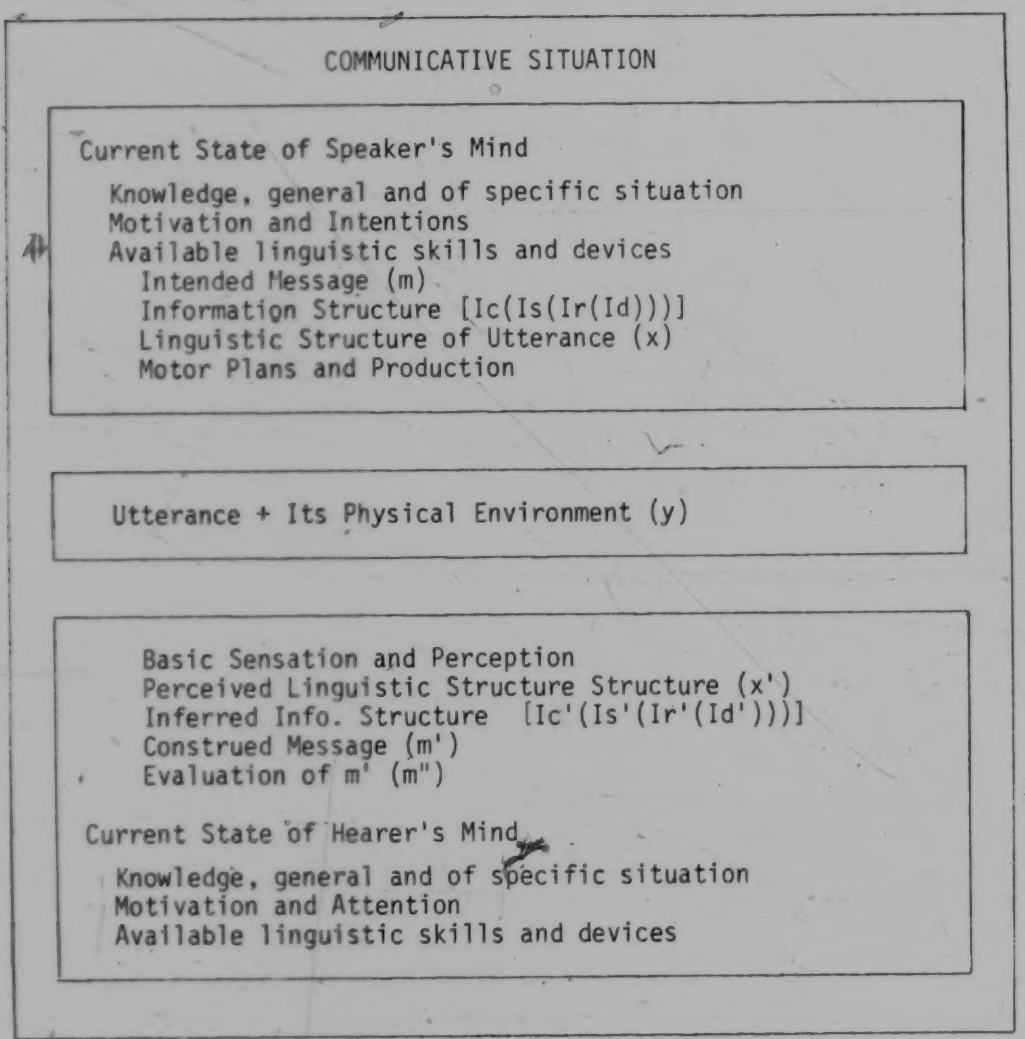
COMMUNICATIVE SITUATION
Current State of Speaker's Mind
Knowledge, general and of specific situation
Motivation and Intentions
Available linguistic skills and devices
Intended Message (m)
Information Structure [Ic(Is(Ir(Id)))]
Linguistic Structure of Utterance (x)
Motor Plans and Production
Utterance + Its Physical Environment (y)
Basic Sensation and Perception
Perceived Linguistic Structure Structure (x')
Inferred Info. Structure [Ic'(Is'(Ir'(Id')))]
Construed Message (m')
Evaluation of m' (m")
Current State of Hearer's Mind
Knowledge, general and of specific situation
Motivation and Attention
Available linguistic skills and devices

Figure 15

A Schematic View of the Variables Involved in Human Communication
(Baker, 1976, p. 7)

natural (or ordinary) language. Natural narratives are those bits of speech which take place in normal, everyday conversation. Artificial narratives, on the other hand, are very much like artificial languages in that they have a "constructed" nature and occur in specific "story-telling" contexts.

Such a distinction, although admittedly vague, is helpful in that it lays a tentative framework for establishing links between speech acts and reading acts. Whether, in fact, narration is a specific speech act is a question of ongoing debate by a number of philosophers and literary critics (cf. Searle, 1975; Ohmann, 1971; Bloomfield, 1976). It is, however, certain that the pragmatic conditions of the term are similar to those of an assertion: a speaker knows that p (where p stands for a proposition or a set of propositions), assumes that the hearer doesn't know that p, wants the hearer to know that p, and wants the hearer to know that he (the speaker) knows that p, and so on. The foregoing conditions hold for natural narratives but not necessarily for artificial narratives. It is further possible to add a number of conversational principles, borrowed from Grice (1957). Norman and Rumelhart (1975) discuss these Gricean principles under the nomenclature of "conversational postulates" in which they state:

> Both participants in a conversation (and, equally, the writer and his expected set of readers) must follow the same set of rules if the communication between them is to be effective . . . The set of rules is called conversational postulates (often abbreviated CP). The principle philosophy that underlies the postulates and, therefore, that governs the interaction between the individuals, seems to be summarized by the two statements:
>
> (25) Be sincere
>
> (26) Be relevant (p. 78)

These rules form the basis upon which other critical principles may be developed for examining the flow of information within conversations. Searle (1965, 1969) refers to these principles as "sincerity conditions" essential for the successful completion of a speech act. These, in turn, have their basis in Austin's (1962) concept of "felicity conditions."

In the speech act setting, then, the context consists of person to person interaction (viz., the basic relation in language). Speaker and listener interact; they exchange roles or, more explicitly, they become involved in the language game of conversation wherein turn-taking is one of the accepted conventions of that game. Rommetveit (1974) talks about the "spatial-temporal-interpersonal coordinates of the act of speech" where the I and you constitute in every single case a temporarily established we engaged in that particular act of communication as opposed to all other forms (e.g., she, he, they). Hence, whatever is shared, presupposed or assumed as already known is something shared, presupposed or assumed by the speaker and the us within an intersubjectively defined here-and-now.

The second feature of the coordinates (I-you) of the act of speech developed by Rommetveit has to do with the complementary relationship between speaking and listening. Complementarity, in this case, is conceptualized as a reciprocally cognized asymmetry between I and you with respect to what is already known. Hence, what is said under certain optimal conditions of complementarity is monitored in accordance with veridical assumptions concerning what

the listener at the moment does not yet know, but wants to know (Rommetveit, 1974, p. 37).

Consequently, the speaker's choice of words (and particularly his choice of illocutionary acts) is basically dependent upon the person being addressed. In the first instance, an utterance such as,

It's a lovely day today,

is intended, not as a comment upon the weather, but more as a conversational device for getting the whole business of speech "off the ground" and of finding out more about the "you" within the "spatial-temporal-interpersonal-coordinates of the act of speech."

Secondly, the listener's response depends, to a large extent, upon just how well illocutionary uptake and perlocutionary effect is secured. Hence, a standard response to the speaker's comment about the weather might be one of agreement such as,

Yes, we are having a lovely fall season,

whereupon the listener to this response might take that comment to be an invitation for extending the dialogue for a longer period of time and for switching the topic to more genuine concerns as, for example,

Say, Fred, I've been meaning to ask you about that twenty dollars you owe me.

For the reader, the nature of the context would be somewhat different and would, therefore, present a different set of constraints for consideration. The basic I-you coordinates are not at the core of the reading act; rather they form the underlying basis upon which reading acts are recognized as sharing the language game of conversation. At the same time, however, the essential complementary

relationship between speaking and listening would still be in effect. In other words, speech acts represent the discernible clothing upon the body of language; those vestments which lend substance and meaning to that which is being said. In reading acts, the reader must make full use of knowledge of these linguistic acoutrements in order to come to a more complete understanding of the fabric of the text.

In reading acts, the context may be regarded as the written text. This text could take the form of a novel, short story, play, a written assignment, a technical manual, or a newspaper. The written context, as such, varies according to the nature of the material being read. In this respect, the emphasis is upon a particular sense of "read," as Ross (1974) describes it, where reading is an active capacity in which the purpose of reading is to process text visually to a "reading output."

Basically, the total context underlying reading acts would be inextricably interwoven with the total communicative situation as it exists in person-to-person interactions. In essence, this represents the shared context between writer and reader. The writer's choice of illocutionary acts (i.e., stylistic choices) along with their logical arrangement in a linear (sequential) fashion constrains, or sets constraints upon the content and structure of the dialogue. The reader, in turn, must subject himself to the constraints set by the writer and the text itself. The words and sentences chosen by the author of the text represent personal choices; they are part of the writer's way of viewing the world. The reader understands what the author is saying according to his knowledge of the "world" created by

the author. Hence, there would be gradations in terms of the reader's grasp of the text. However, this is not to suggest that there is a private language shared only by the writer of the text. The language of the text should be written in a clear-cut recognizable form; there are conventions to be observed. It is the experiences being shared which may present problems for the reader and not the words of the text themselves.

The words the author chooses are words which are part of a shared conversational context; they represent the shared, conventional linguistic terminology by which members of that same community communicate with one another. Such conventions, however, are generally subordinated to the dominant purpose of the author, which may be to write a novel, play, poem or article dealing with a particular topic of special interest to the writer.

The reader's "uptake" of the writer's text will then depend, to a large extent, upon his grasp of the social and cultural milieu of the text along with his own personal facility with the language. Hence, the reader must make use of his underlying competence with the language (i.e., of speech as action) to grasp the content of the intended message provided by the writer of that text. Competence here refers to the reader's available linguistic skills, including those aspects of communication mentioned by Baker (1976): basic sensation and perception, perceived linguistic structure, inferred information structure, construed message (m'), and evaluation of m'(m"). These competencies are then integrated with the current state of the hearer's mind to arrive at an interpretation of the printed message.

IV. MEMORY AND COGNITION

On the basis of the foregoing discussion, mention has been made of the essential nature of the code and its relation to the context of both spoken and printed messages. What is required at this juncture is some explanation of the way information is processed, stored and retrieved from the brain. It is now apparent, from current research into neurological processes, that information is not processed in a random fashion, nor is it received in discrete, unrelated bits. Miller (1956) was one of the first to describe how information is "chunked" for subsequent processing, storage, and retrieval.

There has been a tendency in the past for researchers who have developed information processing models of human memory to focus their attention upon structural aspects of the human memory system. Presently, however, a growing tendency for researchers has been to direct their attention to the processes involved in learning and remembering. The end result of this interest has been a concerted attempt to provide an adequate description of the characteristics and interrelationships of the successive stages through which information flows. An alternative approach has been to analyse more directly those processes involved in remembering—processes such as attention, encoding, rehearsal, and retrieval—and to formulate a description of the memory systems in terms of their constituent operations (cf. Craik and Lockhart, 1972; Hyde and Jenkins, 1969, 1973; Neisser, 1967).

Basically, memory performance appears to be enhanced to the extent that the context, or encoding question, forms an integrated unit with the word presented (Craik and Tulving, 1975). Ostensibly,

a congruous encoding yields superior memory performance owing to the fact that a more elaborate trace is laid down and because, in such cases, the structure of semantic memory can be utilized more effectively to facilitate retrieval.

A number of researchers draw a distinction between long-term versus short-term store in the processing, storage and retrieval of information in memory. Short-term memory is visualized as a temporary "holding-place" for immediate information, a "depot" where incoming information is analyzed and categorized for storage and subsequent retrieval when it is placed in long-term memory store. The Shiffren and Schneider (1977) model refers to short and long-term memory processes in discussing the notion of information flow from input stages to output of responses. Neisser (1967) also refers to short-term and long-term memory processes as being an integral part of the information processing strategies of pre-attentive processes and focal attention. In addition, Luria's (1966a, 1966b) concepts of simultaneous and successive synthesis includes reference to an input and sensory register stage not unlike the concept of short-term store.[1] The sensory register acts as a buffer which takes in information to be scanned by the central processor, which can then pass this information along for storage and later retrieval.

Whatever the conceptual framework adopted, the receptive language processes are capable of analysis from any of the theoretical viewpoints mentioned above. In terms of the depth of processing

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[1] The revisions to Luria's (1966a, 1966b) model have been developed by J. P. Das et al. (1971).

analogy, for example, it is possible to consider various levels of processing information. Hence, the speech act, at one level of analysis (e.g., the A-level) might involve such basic communicative strategies as gestures, facial expressions or bodily movements. The corresponding A-level for processing print might involve perception of lines on paper at different angles and at different positions on the printed page. In terms of the actual process of reading, A-level processing might involve attending to (or bringing one's attention to) the lines of print upon the page or relating speech sounds to print upon the page.

It is further possible to visualize A-level episodic memory traces being subordinated to C-level (Act level) productions where the actual "stream of sound" is uttered in a clear, articulate manner in the form of spoken language. Such productions would correspond to the phonetic and phatic aspects of the locutionary act. Correspondingly, at the C-W (Act-level from the writer's point of view) level, this stage comprises the formation of letters within words and sentences. C-R acts (i.e., reader acts at the C-level), on the other hand, generally involve the reader bringing his attention to bear upon the printed page.

E-level acts (i.e., acts of thinking and/or cognition) represent the succeeding level of processing and present the level to which C-level acts are subordinated. E-level acts, in turn, involve cognitive reactions to what has been observed at the A-level and C-level. Hence, the total speech act in the total speech situation would, together, produce an illocutionary act in its intended sense. "Uptake" would

be secured, provided all the conditions had been met in the production of the speech act. In other words, the fully produced locutionary act would contain the correctly intended illocutionary force and propositional content. Consequently, having said (or written),

"The"

I now go on to say the rest of the locution,

"cat is on the mat."

Hence, having initiated the locution by saying "The," I am now in the position to continue and complete the locution and, by so doing, perform the illocutionary act of making a claim.

With respect to the reading act, the reader (at the E-R level), reacts to the meaning encoded upon the printed page. Both A-R and C-R level processes are brought to bear in recovering the E-R level meanings intended by the writer. Perlocutionary effect concerning what has been read may be direct or oblique (cf. T. Olson, 1974) in that the reader may recognize the direct intended illocutionary intentions of the writer, or s/he may associate the illocution (i.e., the claim) with his own experiences (i.e., that he, for example, did not like cats or that his own cat always slept on the sofa).

To sum up, the hypothetical constructs proposed for memory processes can be represented in a short-term, long-term storage and retrieval paradigm, or in a depth of processing format where higher levels of processing operate on lower levels, or in the opposite fashion, depending on the demands of the reading task. Such a view appears to be consistent with some philosophical positions regarding a levels of analysis view of language (Bosley, in press; Wittgenstein, 1957).

A recent study by Schweller, Brewer and Dahl (1975) utilized the nomenclature of speech act theory to analyze selected sets of sentences as part of a memory task for illocutionary forces and perlocutionary effects. In the study, illocutionary force was defined as an utterance which corresponds roughly to the intent of the speaker (to warn, to ask, to order). The perlocutionary effect was defined as the effect the utterance might have on the hearer (to amaze, to bore, to frighten).

The main hypothesis of the study was that,

> . . . since understanding the illocutionary forces and the perlocutionary effects of utterances appears to be a central part of using language . . . subjects hearing sentences containing reported utterances would confuse these original sentences with new sentences containing illocutionary forces or perlocutionary effects consistent with the original sentences. (Schweller, Brewer and Dahl, 1975, p. 325)

In summarizing their findings, Schweller et al. confirmed that the predicted effects were found in recall for illocutionary forces and in recognition memory for perlocutionary effects. The overall results of the four experiments demonstrate the highly active nature of the hearer's processing of sentences and the effects this active processing has on memory for sentences. Subjects within this experiment thus seemed to elaborate sentences they have heard in terms of illocutionary force and perlocutionary effect.

Another factor discussed in this study is that the subjects worked out the implications of the sentences under laboratory conditions just as they would have ordinarily worked them out in ordinary speech act (conversational) situations. Hence, it would appear that subjects in the experiments displayed considerable

elaboration in working out these implications even when it served no specific purpose and when it caused the subjects to make errors in recall in recognition.

Correspondingly, the results of the investigation demonstrated two additional types of inferential processes related to comprehension of sentences which can be shown to have effects in memory. Illocutionary forces and perlocutionary effects represent two additional inferential processes which are an integral part of human memory. Furthermore, the results of these experiments support the general theory that human memory is not a passive, isolated repository of information, but rather an active, dynamic process whereby information from one domain interacts in a very systematic fashion with knowledge from other domains.

In sum, two factors related to the study need to be noted here. In the first instance, it should be noted that the subjects read and reacted to the material presented to them. Hence, the study represents an analysis of selected aspects of reading processes. Secondly, the experimental results suggest that reading acts are active, involved processes in which the reader utilizes various knowledge sources in recovering the meaning from the text (cf. Jenkinson, 1976).

V. RULES FOR PROCESSING

Searle's (1969) claim that "speaking a language is engaging in a rule-governed form of behavior" represents the basis upon which his general theory of speech acts rests. In the development of his

general theory, Searle has provided a set of "rules" governing the successful performance of the illocutionary act of promising. Linguists, on the other hand, have developed a number of contrasting theories regarding the distinctive features of sound contrasts in the English language (cf. Chomsky and Halle, 1968). Chomsky's (1957, 1965) notion of "rules" for effecting the transformation of utterances from deep to surface structure represents a relatively recent attempt to examine the basic structure of language.

The crucial aspect of this discussion regarding the relationship of structure to function is that this is still a relatively unknown area of study. However, some recent work by Dore (1974, 1975, 1977) has shed further light concerning the relationship of structure to function. Dore's contribution to this area of investigation lies in his view that the basic unit of analysis in language is not the sentence; rather, the basic unit of analysis in pragmatics is the speech act.

In Dore's view, it is the child's communicative intentions which play the major role in the elaboration of his knowledge of grammatical structures. In other words, Dore's claim is that form follows function. Hence, while it is possible to discover "rules" which describe the articulation of basic speech sounds and which reveal which rules are in operation in fully produced utterances, the highest level of rule-governed behavior concerned with language functioning occurs at the level where the communication of meaningful information is the basic purpose. Ross (1970) claims that the highest clause in the deep structure or semantic structure of a sentence is a performative clause.

In sum, the basic rules for the communication of intentions in language are realized, to a large extent, in Searle's "rules" for illocutionary acts. Correspondingly, Grice's (1975) distinction between two basic kinds of meaning has relevance for the development of rules for the communication of intended meaning from participants in a communicative setting. In this respect, Grice distinguishes between what is said and what is implicated, and outlines an informal inferential strategy, in terms of his Cooperative Principle and its constituent maxims of Quantity, Quality, Relation and Manner, whereby conversational implicatures can be derived from the overt ("said") context of an utterance. Consequently, from B's statement in:

(1) A: Where does X live?

B: Somewhere in the Northern part of Alberta,

it can be "worked out," with the help of the first maxim of Quantity and the second maxim of Quality, that B implicates that he does not know in which town X lives.

Searle (in Cole and Morgan, 1975) suggests that the manner in which Grice's notion of conversational implicature can be utilized is through an analysis of indirect speech acts (e.g., Can you pass the salt?).

Bosley (in press) has also developed a method for analyzing speech acts wherein talk amongst participants in a conversation can be assessed utilizing his theory of level analysis. Bosley's basic notions of dominance and subordination along continuance help to explain how a conversation may be initiated and carried through to successful completion.

With respect to the notion of rules for processing speech acts and reading acts, Searle's (1976) classification of illocutionary acts provides a means for analyzing illocutionary acts wherein paradigm performative verbs in each of five categories are described as they exhibit different syntactical properties. Searle notes that there are at least a dozen linguistically significant dimensions of difference between illocutionary acts. Of these, Searle observes that the most important are illocutionary point, direction of fit, and expressed psychological state. These three form the basis of Searle's revised taxonomy. The five basic kinds of illocutionary acts are: representatives (or assertions), directives, commissives, expressives and declaratives. The taxonomy itself represents a revision of Austin's (1962) original classificatory system.

The value inherent in such a classificatory system lies in the assistance it provides to linguistic ethnographers in enabling them to test the universality of the criteria across language as well as refining the classificatory system itself. Furthermore, the taxonomy should help writers by refining the choice of words best suited for use within a particular written context. In addition, such a system might help writers (and readers) to understand typologically the differences in hierarchy and markedness among local (linguistic) systems.

From the reader's point of view, the classification system could conceivably provide a basis for analyzing the structure of writing according to the particular kinds of illocutionary acts being performed. Hancher (1975), for example, has analyzed one of

Shakespeare's sonnets using the nomenclature of illocutionary acts as his major analytical device.

In sum, the "rules for processing" concept can be applied in a number of areas which have direct input to the fuller understanding of reading processes. For example, the theoretical background to psychological rules for processing can be found in the information processing theories of Neisser (1967), Ausubel (1968), Luria (1966a, 1966b), Shiffren and Schneider (1977), amongst others. Applications of these very same processes to reading theory have been elucidated by Latham (1973), Walker (1972), Goodman (1970), Smith (1971), and Rumelhart (1976).

The end-product of the concept of "rule-utilization" should be a meaningful understanding of the spoken or written language. Searle's (1969) basic assertion that "whatever can be meant, can be said," should be applicable to reading and writing, as well as to speaking.

The paradigm, then, should apply to the processing of information, whether in its spoken or written form. The end-state or goal of communication is the meaning one gains from spoken or written discourse.

Generally, it should be possible to develop a number of different models showing how information in printed form can be processed for meaning. However, some models are more perspicuous in terms of their ability to illustrate these processes. In this respect, Rumelhart's model seems to offer a more clearly articulated picture of reading processes; one that attempts to account for basic processes along with the more complex psycholinguistic reading processes such as

prediction and accessing print directly for meaning. In Rumelhart's model, reading processes can be analyzed either from the "bottom-up" or from a "top-down" perspective, depending upon the demands of the reading task. Furthermore, the Rumelhart paradigm allows the reader to be more selective. That is, the reader has the opportunity to select relevant, but not necessarily essential, information.

Cognizance must also be taken of the method of analysis involved at all levels of Rumelhart's model, including the following variables: the kind of information being processed, the basic unit of information, and that relevant information processing theory which is compatible with the main concerns of the model. First of all, it would appear that present research findings lend support for the main tenets of Rumelhart's theory. For example, Rumelhart deals at length with the notion of information theory having as its essential core, a number of accumulated knowledge sources which are scanned and accepted or discarded as they are found to be compatible with "the best possible interpretation." The model is further equipped with a "message center" which has at its disposal a running list of hypotheses concerning the nature of the input string.

Secondly, it would appear that the notion of "best possible interpretation" is related to the "best possible meaning" for the text. That is to say, in the processing of print for meaning, the reader is looking for meaningful aspects of the printed message; aspects which are compatible with his (the reader's) interpretation. Basically, the related research for this concept involves the principle that the reader does not receive and process all the sensory information at his

disposal. This principle is known as cue sampling (Walker, 1972). The other related principle to cue sampling states that information processing is a reconstructive process, one of recreating, from the partial information received and processed, the total event presented in its oral or written mode. Neisser's view of this process is concerned with "referring to all the processes by which sensory input is transformed, reduced, elaborated, stored, recovered, and used" (p. 4). Latham (1973) sees the mature reader as one who "through a process of figural analysis, operating at the level of the preattentive processes, separates the individual words of sentences upon which the higher cognitive processes operate" (p. 367). Hence, in the foregoing references, there appears to be adequate theoretical support for the information processing model developed by Rumelhart. Preattentive processes, for example, perform certain preliminary aspects of reading by initially "chunking" the figural unit of a word. Part of the search carried out by the message center in Rumelhart's model could conceivably operate in the same manner without doing violence to the essential operation of the model. Focal attention, which permits the reader to zero in on particular units, is compatible with Rumelhart's feature extraction device.

In fine, the initial analysis of the signal is performed automatically through the operation of the preattentive processes. Interpretation of the signal takes place when it is matched with those of some representation stored in memory. This representation functions as the guide to information stored concerning the meaning of the signal (Ausubel, 1968).

Focal attention, the follow-up process to the preattentive processes, functions in concert with other cognitive processes to determine the meaning of the unit being dealt with in short-term (immediate) memory. The whole process, analysis-by-synthesis, functions as an integrative process in which the language processor formulates an hypothesis about the original message. The total process, as it stands, appears to be compatible with Rumelhart's model and its assumed processes.

It appears evident that visual synthesis, like its counterpart auditory synthesis, can produce units of various sizes. The synthesis of these units develops according to rules—graphological, graphemic, syntactic, semantic and pragmatic. Hence, the rule analogy seems applicable as an account of the interplay of various processes in decoding print for meaning.

It is further evident that Neisser's concepts of preattentive processes and focal attention have their counterpart in Luria's (1966a, 1966b) notion of simultaneous and successive synthesis. Simultaneous synthesis, with its emphasis upon the global overview of the (visual) field, refers to any (in this case visual) system of relationships. Successive synthesis, on the other hand, has to do with the processing of information in serial order, as in human speech. In this respect it should be noted that most language relationships deal with sequential processes, as do most logical thinking processes. Lateral thinking, on the other hand, tends to emphasize intuitive reasoning (cf. DeBono, 1967).

Luria further attempts to account for other forms of processing

information. He does this by including three sub-categories with simultaneous and successive synthesis: direct perception involving selective attention to the stimulus field; mnestic processes related to memory store (both long-term and short-term); complex intellectual processes related to examining and confirming relationships among components of a system. Essentially, the three sub-categories attempt to account for such cognitive factors as attention, memory, and thinking processes.

It seems clear that both Neisser (1967) and Luria (1966a, 1966b) are viewing information processing from a two-stage perspective. In the first stage, there appears to be a global scanning of the (visual) field. The second stage is characterized by a more specific analysis of particular units which are then selected for further attention and study in order to relate them to the individual's "context of understandings" concerning the information he is examining. In both instances cited above, the processes are somewhat analogous to Shiffren and Schneider's (1977) notion of controlled and automatic processes.

The contact that the foregoing points of view make with Rumelhart's (1976) model appears to lie in that area associated with determining whether the reader needs to examine the text from a "top-down" or "bottom-up" perspective. If the reader is looking for a general understanding of the text (i.e., if he is seeking to reduce uncertainty concerning the information he is processing), he might engage in a text-sampling, predicting kind of behavior as part of his search. If, on the other hand, he is concerned with (or his focus is

upon) a specific part of the visual array, he would then utilize a "bottom-up" approach.

Whatever approach the reader adopts in processing print to a "reading output," various information processing strategies would be employed, whether they involved preattentive processes and focal attention, simultaneous and successive synthesis, controlled and automatic processes; all such processes seem to be processes which represent strategies which are in agreement with the basic tenets of Rumelhart's model. Moreover, the strategies themselves appear to be capable of becoming operational at either end (or at any level) of the "top-down" or "bottom-up" continuum. As such, they represent generalized cognitive functions which come into play depending upon the nature of the task.

The view of reading as an "interactive" process also has some relevance to Bosley's (in press) theory of level analysis. The guiding principles of continuity, dominance and subordination, and support as developed by Bosley are representative of a view of language which has moved away from a correspondence theory of language and truth towards an action and achievement centered philosophy. Fundamental to this notion is the concept of P-cases, which are somewhat like speech acts, but which attempt to expand the concept to include a larger frame of reference. P-cases, where the "P" stands for "participatory," signal the ways individuals can participate in the total communicative situation. As a result, it then becomes possible to speak of the P-cases of promising, pointing, pleading, and so on. That speech acts, or P-cases, are spoken of should make clear the idea

that a distinction is being observed between an expression and its being uttered or written. Again, this contrasts with the tradition in logic of taking the sentence as the unit of analysis. This distinction is of fundamental importance in that, in the case of reading acts, what the reader focuses on (as his fundamental unit of perception) may, in turn, affect his ability to decode the written message in an effective or meaningful manner.

P-cases may also be related to speech acts (and, correspondingly to reading acts), where four sets of P-cases are distinguishable: (1) "Propositional P-cases," including claiming, disclosing, questioning, denying, etc.; (2) P-cases such as making clear what one is claiming, making clear that one is claiming, and making clear what is being talked about (cf. to Searle's "propositional speech acts"); (3) trivial P-cases, like Searle's utterance acts (cf. to Austin's locutionary acts), including the uttering of sentences, phrases, expressions, words, morphemes, phonemes, and writing everything, right down to the letter; (4) primitive P-cases, including greeting, pointing and, perhaps, pleading. This list should not be considered an exhaustive one; rather it represents a preliminary endeavor in the development of Bosley's theory of level analysis.

Associated with the foregoing notions is the methodology developed for representing these underlying principles. Cycling diagrams is the term employed by Bosley and it involves the undertaking, continuing and completing of a P-case. The dominant P-case is called the outer cycle. Subordinated P-cases are inner cycles of greater or lesser degree. It is not necessary here to detail all the basics of

diagramming. The relevant aspect of this notion is that of dominant P-cases and the relationship of subordinate P-cases to these dominant kinds of speech acts.

What, then, is the relationship of P-cases to speech acts and reading acts? The relationship, it seems, has a lot to do with determining the dominant themes in the written text and of determining the relationship of subordinate (or supporting) ideas to these central themes or ideas. Clearly, this kind of analysis is not carried out simply through the application of basic word recognition skills; rather it seems evident that the skills of word recognition are subordinated to the role that longer stretches of discourse play in the elucidation of meaning. Consequently, it can be assumed that the meanings of individual words in sentences clearly depend upon the interaction of world knowledge and the context of the message. Comprehension of written discourse is therefore not simply the summation of words and sentences; comprehension in reading depends to a great extent upon the interaction of words, meanings and messages in the full elaboration of the total message structure.

Hence, in addition to those "structures" which are "in text," there are those "knowledge structures" or "knowledge sources" which the reader brings to the printed page. Anderson et al. (1977) calls these knowledge structures "schemata" (after Bartlett, 1932 and Kant, 1871). Minsky (1975) refers to these structures as "frames" and Schank and Abelson (1975) call them "scripts."

In Anderson's view, schemata represent the generic concepts underlying objects, events, and actions. Schemata are abstract

concepts which contain a "variable," "dot," or "place holder" for each constituent element in the knowledge structure. One important aspect of the schema is the specification of the network of relations that hold among the constituents.

Schemata, as an explanatory device for underlying concepts, has its counterpart in Rumelhart's "knowledge sources" which serve to supply information concerning the "best possible interpretation" regarding the nature of the written message. When the reader is able to "construct a correspondence between relevant schemata and the givens in a message," then that person gains the confidence that the message has been understood. In other words, when the dots are filled with particular cases, a schema is said to be "instantiated."

A text can never be said to be fully explicit. Ostensibly, schemata provide the basis for "filling gaps, the basis for inferential elaboration, the basis for positing states of affairs, not expressly mentioned, that must hold if a passage is to permit a coherent interpretation (Anderson et al., 1977, p. 370). Correspondingly, readers are forced to make logical inferences, coordinate reference, pragmatic inferences, and to supply suppositions about an author's intentions. Inferential thinking is required concerning the motives and mental states of characters, antecedent and consequent events, instrumentality, and illocutionary force as well as propositional content.

A final aspect of schemata is that, at a very early stage in processing, high-level schemata can assist a person to provide one interpretation to a passage without even considering other possible interpretations. The notion of prediction is applicable here where,

in speech act situations, the listener can generally predict how the speaker will behave (i.e., the form his message will take). In this respect, it makes sense to regard speech as conventional and rule-governed. The writer, on the other hand, "anticipates" his audience. Basically, he writes with his audience in mind, and to such an extent that the reader can often predict the final outcome of the story, although there is often an unusual "twist" to these endings just so that the reader will be kept "in suspense" until the very last moment. The more successful the writer, the longer (or further into the novel) he is able to delay the actual process of predicting the eventual outcome of the story line he has established.

From the point of view of psycholinguistics, the reader can ostensibly "predict," on the basis of syntactic and semantic cues, much of the meaning of that which he is reading. In sum, the reader ostensibly operates on the basis of partial cues to elucidate or clarify the meaning of the text. As Goodman (1970) says, the "proficient" reader can move directly from the text to its encoded meaning without the intervening process of decoding to an oral output.

In sum, dominant high-level schemata are often a basic characteristic of some texts with the resulting effect being disagreement between the data in the text and the reader's interpretation of that very same text. In this regard, a "bottom-up" theory of reading (e.g., Gough, 1972) does not provide sufficient explanatory power to account for the derivation of meaning from the text. As Rumelhart (1976) concludes, reading cannot be regarded as a strictly "top-down" or "bottom-up" process; it must involve both, depending upon the

nature of the reading task and upon the capabilities of the reader himself. Nicholson (1977) states that both the Goodman (1970) and Gough (1972) positions are valid, depending on the kind of comprehension being sought and the criterion being utilized for acceptability of responses. However, Nicholson contends that the disruptive effects of errors upon accurate comprehension suggests that the Goodman view lacks completeness. In Nicholson's view, accuracy is necessary for atomistic precision; less so for global interpretation.

VI. RUMELHART'S MODEL REVISED

In assessing Rumelhart's (1976) interactive model of the reading process, it appears that some aspects of Searle's (1969) speech act theory are capable of integration within the framework of the Rumelhart paradigm. It is important to note here that Rumelhart has been interested in the basic features of communicative competence as it relates to his current work on an interactive model of the reading process. Norman and Rumelhart (1975), for example, devote an entire chapter to developing a theory of reference and comprehension. Implicit within this chapter is the notion of conversational postulates, including such notions as the context in which sentences are found, pronominalization, and definite description.

Albeit, then, some revisions could be effected to Rumelhart's stage representation as outlined in Figure 16. The nature of these revisions would be to broaden the category of "knowledge sources" in Rumelhart's model to include reference to pragmatic knowledge sources and knowledge of illocutionary acts.

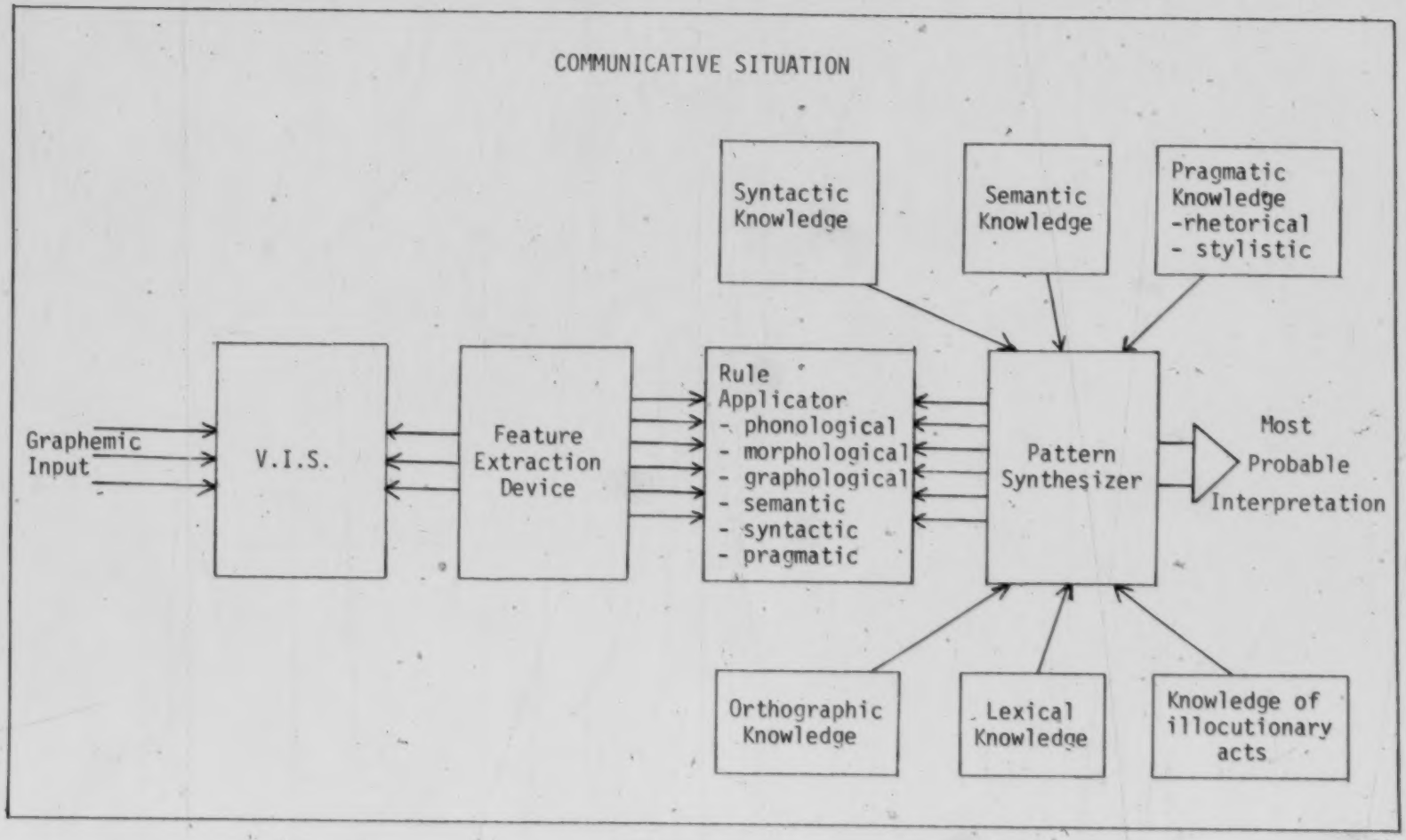

Figure 16

Revised View of Rumelhart's (1976) Stage Representation of an Interactive Model of Reading

Perhaps it can be stated that the strength of Rumelhart's model is that it is basically a straightforward stage representation which attempts to avoid some of the problems that more complex models of the reading process often fall heir to in attempting to explain too much of the process itself. At the same time, the model is sufficiently "simple" to allow for the possibility of adding more variables in order to increase the explanatory power of the model.

With the foregoing features of Rumelhart's model in mind, Grice's (1976) rule formulations are pertinent additions in that Norman and Rumelhart discuss them under "Rules for the Speaker" and "Rules for the Listener." The rules are elaborated by Grice in the following manner.

Rules for the Speaker

It is important to note here that Grice's main concern is with implicatures, which he defines as the things implied by a statement. Conversational implicatures often derive as much from the conversational postulates as from the formal context of the utterance. Grice provides four main headings for the conversational postulates: quantity, quality, relation, and manner. Rules are listed for each in the following manner:

Quantity:

(a) Make your contribution as informative as possible.

(b) Do not be more informative than required.

Quality:

(a) Do not say what you believe to be false.

(b) Do not say that for which you lack adequate evidence.

Relation:

(a) Be relevant.

Manner:

(a) Be perspicuous.

(b) Avoid obscurity.

(c) Avoid ambiguity.

(d) Be brief.

(e) Be orderly.

(f) Be polite.

Rules for the Listener

The listener (or reader) must make use of the conversational postulates in reverse, seeking to interpret just what hidden meaning might be contained within the communication that has been received. Thus, the recipient assumes that language flows smoothly back and forth among the participants, with each statement relevant to the topic, and neither saying too much nor too little. Anytime that a violation of the conversational postulates is perceived by the listener or reader, it is taken to be a signal that some obvious meaning is intended.

The import of Grice's (1957) distinction between rules for the listener-speaker lies in its application to the same distinction between rules for the writer-reader. Grice's notion of conversational implicature has been utilized by Rumelhart in the analysis of errors in oral reading (Stevens and Rumelhart in Norman and Rumelhart, 1975). The carry-over is evident when compared to one of the basic premises of information theory concerning the reduction of uncertainty in the intended message.

Rumelhart utilizes the concepts of reference and comprehension as basic notions within his theory of information processing. The basis underlying its use may be found in Haviland and Clark's (1974) "given-new distinction." Ostensibly, this distinction is based on the premise that the listener typically knows a good deal about the topic of conversation, the physical setting of the speech act, the beliefs of the speaker, and so on, even before he attempts to understand a particular sentence. All of this information is assumed to be stored in memory in coded form (viz. in the form of a complex interrelated set of propositions). Each sentence the listener then encounters contains some given information as if it were an address, a pointer, or an instruction specifying where the new information is to be integrated into the previous knowledge. The strategy would then consist of three conceptually separate stages: (1) discovering the structure of the sentence, determining what is given information and what is new; (2) finding the address in memory as determined by the given information; and (3) placing the new information at that address (Clark and Haviland, in Cohen (Ed.), 1974, pp. 105-106).

The analogy of "addresses" in the "given-new strategy" has its counterpart in a number of cognitive theories which were looked at in the course of this discussion. The Shiffren and Schneider (1977) model, for example, looks at the processing of information (and storage) from the perspective of long-term store and short-term store wherein the former consists of a permanent, passive repository for information (the permanent address) while short-term contains new information, of a temporary nature, which must be moved from its

itinerant dwelling place to be integrated with more stable and enduring bits of information. However one conceptualizes this process, it is important that provision be made to account for incoming information and to account for its flow to a more permanent storage place where, in due course, it can be recalled as needed.

Rumelhart (in Norman and Rumelhart, 1975) has developed a computerized system designed for dealing with language comprehension and question answering. The system is called Verbworld (Rumelhart and Levin in Norman and Rumelhart, 1975, pp. 179-200). The essential operation of the system has to do with evaluating the procedural definition of the predicate terms in the sentence. For example, a sentence like "Mary gave Spot to Jane" is understood by treating it as a call to the procedure give, with the concepts for "Mary," "Jane," and "Spot" as arguments of the procedure. Consequently, the comprehension of the sentence occurs through the evaluation of this procedure. Rumelhart (1975) has further developed a story grammar which attempts to account for the structure of a wide range of simple stories. It is evident, therefore, that Rumelhart has ranged over a wide/varity of topics in developing his understanding of the communicative process.

In sum, an analysis of Rumelhart's research reveals that he has attempted to account for the whole area of communicative competence (including speech acts) within his general theory of information processing. Hence, the inclusion of selected aspects of speech act theory within his model would represent compatible additions to the model itself.

Revisions to the Knowledge Sources

The following aspects were felt to be appropriate additions to Rumelhart's model:

Pragmatic knowledge. Knowledge at this level of abstraction would involve the cognitive processes of discourse production, comprehension, storage, and reproduction. It would also be concerned with knowledge of speech as action (viz. a knowledge of how speech acts are used in communication). Dore (1977) describes such knowledge in young children as their "communicative competence." Consequently, the sum total of syntactic-semantic-pragmatic knowledge sources would constitute a grammar as a form-meaning-action rule system (van Dijk, 1977).

Rule applicator. The rule applicator would function to apply the rules to the pattern synthesizer as a function of the demands of the language processing task at hand. Hence, if a detailed (phonetic) analysis of a specific word were required, the rules applied would necessarily involve phonological rules. In this respect, some interaction would be required between the various rule systems as to which set of rules was required. It also seems likely that some rules would "override" others where, for example, pragmatic/semantic rules would take precedence over phonological rules in determining the meaning of the text.

The pertinence of "rules" for processing to a meaning output seems to be advantageous within the Rumelhart model. However, it should be noted that the general topic of rule-accounts of language, and of social behavior, are generally complex and, at times, confusing.

As Delia (in Benson and Pearce, 1977) states:

> A comprehensive and coherent account of the rules perspective would necessitate, on the one hand, a discussion of the relation of the concept of rule to other concepts such as norm, value, maxim, standard, guideline, convention, regulation, instruction, agreement, and contract, and on the other, a careful analysis of the relations between such adjectival-form concepts as rule-governed, rule-satisfying, rule-guided, rule-fitting, rule-bound, rule-constituted, rule-conforming rule-generated, rule-regulated, rule-reflective, rule-confirming, and rule-applying. (p. 54).

Cushman (in Benson and Pearce, 1977) presents a number of claims regarding the status of rules in communication. In his view, to say that an action is rule-governed is to say that rules play some active part in the production of the action or activity. It is not just that an action is performed, with the rules then applied to see what action has been performed. Language, as a rule-governed form of behavior, helps us to visualize language as having some means whereby the whole notion of speech is able to "get off the ground."

The important point to be made with respect to rules is that they be seen as representing the context of socially meaningful and cognitively shared worlds. If rules are to serve as explanations of behavior it must be in terms of the rule-guided quality of human behavior. That is to say, reference to rules has explanatory force precisely because rules can be seen to generate behavior. The concept of "rules" is an important issue in relation to Searle's (1969) development of rules for promising in that the emphasis appears to be upon the function of rules in regulating speech amongst two participants in a dialogue. On the other hand, the introduction of phonological or syntactic rules, invariably leads to a discussion of the

underlying psychological processes which are also rule-governed. However, these should not be construed as rules underlying the "rules" for language production. Again, the principle of dominance and subordination can be called upon to render service wherein underlying principles of rule behavior for psychological, syntactic or phonological rule regularities would be subordinated to the main task of undertaking and completing a speech act. Hence, the various psychological "rules" would function as subordinate processes within the broad domain of language as action.

As a final example, Searle's (1965, 1969) set of semantical rules are presented:

> Rule 1. P is to be uttered only in the context of a sentence (or larger stretch of discourse) the utterance of which predicates some future act A of the speaker S. I call this the propositional content rule. It is derived from the propositional content condition (2) and (3).
>
> Rule 2. P is to be uttered only if the hearer H would prefer S's doing A to his not doing A, and S believes H would prefer S's doing A to his not doing A.
>
> Rule 3. P is to be uttered only if it is not obvious to both S and H that S will do A in the normal course of events.
>
> I call rules (2) and (3) preparatory rules. They are derived from the preparatory conditions (4) and (5).
>
> Rule 4. P is to be uttered only if S intends to do A. I call this the sincerity rule. It is derived from the sincerity condition (6).
>
> Rule 5. The utterance of P counts as the undertaking of an obligation to do A. I call this the essential rule.
>
> These rules are ordered: Rules 2-5 apply only if Rule 1 is satisfied, and Rule 5 applies only if Rules 2 and 3 are satisfied as well. (Searle, 1965, p. 238)

Knowledge of these semantical rules is, therefore, a prerequisite

to the application of semantic knowledge (via hypotheses) which are brought into the pattern synthesizer (as in Rumelhart's model). In terms of reading acts, they must involve an implicit recognition that the rules apply. In other words, the reader must recognize that the speech act situation is the same as though he were the author or instigator of the speech act itself. Correspondingly, there are certain semantical rules for the reader which are presented in the following manner:

> Rule 1. The reading of sentence S in context C obligates the reader R to believe that S counts as a speech act in context C. This is the essential rule for reading acts.
>
> Rule 2. Reading act P (e.g., a written promise) is to be written only in the context of a sentence S (or larger stretch of written discourse) the writing of which predicates some perlocutionary effect E on the reader R. The perlocutionary effect E is dependent upon the propositional content (Rule 1) plus the intended illocutionary force of the written text.
>
> Rule 3. Reading act P can be written whether in fact the reader R would or would not prefer the writer to do so.
>
> Rule 4. Reading act P, once written, can be subjected to analysis by the reader R to see if Rule 3 for speech acts applies.
>
> Rule 5. Reading act P is to be written as though it was a believable account of discourse and subject to the conditions laid down in Rule 4 for speech acts.

The interrelationship between speech acts and reading acts can be found in the correspondence of phonological, syntactic and semantic aspects of written discourse with their attendant counterparts in spoken discourse. The interrelating of spoken with written discourse requires that the reader possess some knowledge of the pragmatics of spoken discourse. Indeed, what seems to be required is

some sort of process to compare the message as it is encoded on paper with the reader's knowledge of speech acts along with language's special properties and functions in their written form.

Vygotsky (1934/1962), for one, conceptualizes a special feature of language, called "inner speech," that lies at the intersection of language and thought. According to Vygotsky, inner speech has a peculiar structure in that as it emerges, "it shows a tendency toward an altogether specific form of abbreviation: namely, omitting the subject of a sentence and all the words connected with it, while preserving the predicate" (p. 139). Luria (1961) says that the functional systems in which inner speech plays a critical part "enable man to go far beyond the bounds of his physical capacities and organize the well-defined forms of active deliberate behavior whose causal explanations has always baffled psychologists" (p. 18). Inner speech, then "provides a kind of verbal orientation to our surroundings, as it were, reflecting the surrounding objects and checking the possibilities of using them to find a way out" (p. 33).

In light of the view of reading presented here, it appears likely that inner speech is the mechanism that integrates meanings gained from text with meaning as it arises in the use of the language. Such a position is in accord with the viewpoint of this discussion regarding meaning as a property, not of sentences, but rather of their use. Hence the content of Rumelhart's knowledge source would consist of meaning as it is represented at differing levels according to its functional level (see Harman, 1968). For example, level 1 meaning would correspond to the meaning of thoughts (i.e., explaining

what it is to think that p, to believe that p, to desire that p, etc.). Level 2 meaning would relate how language is used to convey information (i.e., the meaning of messages) while level 3 meaning would deal with the meaning of speech acts (i.e., how language is used in certain institutions, rituals or practices of a group of speakers).

This latter aspect of meaning (level 3) is of special relevance when relationships of speech act meaning and reading act meaning are being considered. Searle (1969), in his revised Gricean analysis of meaning as intentional behavior, views meaning in the following formula:

$$\text{Meaning} = F(p),$$

where F stands for force and p for the propositional content of the utterance.

It is apparent then that sentences in conversational contexts are interpreted in terms of the following agreed-upon lexical and syntactic conventions (propositional content); a shared knowledge of events and a preferred way of interpreting them; a shared perceptual context, and agreed-upon prosodic features as well as paralinguistic conventions (features of illocutionary force).

Written languages, on the other hand, have no recourse to shared overt context, prosodic features, or paralinguistic conventions. In the written text, such features are not available and as a consequence, the reader (or listener) must call upon his knowledge of shared experiences with the author of the text in order to recover the explicit meaning of the text. Moreover, it appears that this is where, cognitively, the notion of "inner speech" operates to supply

the meaning of the text in that the reader focusses in on the propositional features of the written text and is able, on the basis of his background of experiences, to supply the appropriate illocutionary forces to lend full meaning to that which he is reading. By utilizing his knowledge of "inner speech," the reader is basically integrating speech, language and thought into a carefully reasoned view that represents the "best possible interpretation" of the text.

Knowledge of stylistic features. The reader brings to the text his knowledge of rhetorical and stylistic devices which enhance the quality of both the spoken and written word. Currently, stylistics, as a branch of literary theory, has devoted a great deal of effort to develop a framework for analysis using speech act theory (cf. J. R. Searle, 1976). The basis of the theory rests upon the assumption that stylistic choices of illocutionary verbs and illocutionary acts often determines the quality of the literary work. In like manner, the text can be analyzed using a taxonomy as a basis for analysis and the reader's qualitative "uptake" of the written text depends to a great extent upon his understanding the particular illocutionary verb chosen and upon the intended perlocutionary effect.

VI. SUMMARY

The basic claim that was advanced at the outset of this discussion was that a general theory of speech acts could adequately function as an explanatory basis for the development of a general theory of reading acts. It was further claimed that the two theoretical accounts could be subsumed under a general theory of communicative

competence (Baker, 1976).

Generally, the comparisons which were made dealt with such basic issues as the nature of the code, the essential character of the message, the role of cognitive processes (including memory and attention processes), and rules for processing. In the course of the analysis, some attempts were made to modify Rumelhart's (1976) model to include some of the features of speech act theory, with particular attention given to pragmatic knowledge sources and their influence upon the written text. Included within this discussion was the concept of "rules for processing," a concept based upon the premise that speaking a language is engaging in a rule-governed form of behavior. In all of the foregoing, the essential aim of this discussion was to establish links between speech acts and reading acts.

Reading acts, as the logical counterpart to speech acts, make use of the writer's speech acts to react to the propositional content of the written text, to infer the author's intended illocutionary force (which is implemented within the text), and to respond to the author's intended perlocutionary effect, either in a direct or an oblique manner (Cohen, 1975). In this regard, the "context" underlying reading acts is inextricably interwoven with the total communicative situation as it exists in person-to-person interactions. As was previously stated, the reader must make use of his underlying competence with the language to comprehend the essential semantic and pragmatic features of the intended message provided by the writer of a given text.

Associated with this view of speech acts and reading acts as

compatible viewpoints governing language functioning, is the view that reading skills of word recognition are generally subordinated to the role that longer stretches of discourse play in the elucidation of the meaning of the text. Comprehension of written discourse is, therefore, not merely the "adding up" of words and sentences. In point of fact, comprehension in reading is dependent upon the interaction of words, meanings and messages in the "securing of uptake" from the printed page.

In general, the results of this review suggest that it is possible to point out areas of commonality and difference between speech acts and reading acts. The two areas of language functioning represent mutually compatible aspects of general communicative behavior. Speech acts represent the basic units of meaningful discourse within spoken language. Reading acts represent the logical counterpart within written language.

In sum, it should be noted that what has been suggested within the framework of this discussion is a general account of the theory of reading acts. Basically, the purpose of this investigation was not to attempt to prove a hypothesis. In point of fact, the essential purpose of this inquiry has been to develop a framework for subsequent discussion and experimentation related to a general theory of reading acts.

CHAPTER VII

SUMMARY AND CONCLUSIONS

I. INTRODUCTION

> Philosophising is a two-fold activity; the first division has two parts, namely giving accounts and explanations and also laying down procedures, principles and rules by reference to which a critical inquiry can be conducted . . . We rather account for the construction of our framework and lay down guidelines for giving specific accounts of its construction and use. With reference to such guidelines we can continue critical inquiry; we can keep before ourselves and our successors appropriate questions and considerations. The second division of philosophy is to continue such critical inquiry. (Bosley, 1976, p. 181).

At the outset of this investigation, the claim was made that a critical study of speech acts would provide the basis for the development of a general theory of reading acts. The rationale underlying this claim was that ordinary language philosophy, with its emphasis upon the analysis, classification and re-statement of problems concerned with language and meaning, could provide a suitable framework upon which to build a general theory of reading acts.

The history of the ordinary language movement in philosophy has its roots in the development of the careful analysis of language. G. E. Moore (1922) and Bertrand Russell (1912) represent important figures in the development of this movement.

However, the two principal figures in this "revolution in philosophy" were Ludwig Wittgenstein (1953, 1957) and J. C. Austin (1962). The basic notion of language as a form of action was first espoused in its fullest form by Wittgenstein. Austin, on the other

hand, was perhaps the first philosopher to attempt a fully elaborated theory of language as it is used in communication.

Searle (1969) represents a central figure in contemporary philosophy with respect to his development of a general theory of speech acts. Drawing from Austin's original formulations, Searle extended and revised the basic notions of Austin's tripartite conceptualization of speech acts as locutionary, illocutionary and perlocutionary acts. The guiding thesis in Searle's elaboration of the general theory is that "speaking a language is engaging in a rule-governed form of behavior." In this regard, Searle's thesis represents a major effort at illuminating and detailing the form such rules take within the language game of conversation. Furthermore, Searle's general theory represents the theoretical basis from which a general theory of reading acts has been suggested.

In the course of developing a general theory of reading acts, a major attempt was made to see if conceptual "links" could be established between a general theory of speech acts and a proposed general theory of reading acts. To effect this examination, a number of related areas of study were undertaken. Generally, the fields of psychology, linguistics and psycholinguistics, and information processing theory were examined in light of their contributions to reading theory. Secondly, the basic tenets of speech acts, along with the related theoretical and philosophical writings of Grice (1957), Ryle (1961), Bosley (1976), and others were examined in the light of reading theory in order to explicate areas of commonality and difference.

Basically, what has been adduced as a general theory of reading acts represents a combined view of all the disciplines mentioned in the foregoing statements. More specifically, reading acts can be seen as the logical counterpart of speech acts wherein both are subsumed within the framework of a general theory of communicative competence (Baker, 1976).

Moreover, despite their somewhat disparate nature, both speech acts and reading acts utilize general language processes in the elaboration of meaning, both from the viewpoint of spoken and written discourse. Reading acts, as a general theory of communicative competence, make full use of the written grammar as a form-meaning-action rule system. Reading acts, as such, represent "interactive" processes in which a variety of parallel integrating processes coalesce to produce the "most probable hypothesis" concerning the nature of the printed message. Basically, certain theoretical notions regarding speech acts (taken from Searle, 1969) were seen as being compatible with Rumelhart's (1976) stage representation of reading as an interactive process. These theoretical notions were combined with Rumelhart's stage representation to produce a revised model (see Figure 16).

What has been gained from such a revision, is an information processing theory of the reading process which takes into consideration some aspects of language as a vehicle for communicating one's linguistic and cognitive intentions. In other words, the move is towards integrating an "act and achievement philosophy" into a paradigm which deals with certain specific linguistic structures.

The distinction, it seems, is that one drawn between "act" and "process." The notion of "act" within language implies a view of language being used to convey information from one person to another. In philosophical terms, the shift in emphasis is away from a substance centered towards an act and achievement centered philosophy (Bosley, 1976). The linguistic aspect of this shift is a move away from words and their relations to an emphasis upon the utterance, the thinking and the writing of words and the relation between and among acts of utterance and thought (Ibid., p. iii).

As such, the notion of "act" contrasts with that of "process" wherein process involves an ongoing series of events within the content of "act." Hence, speech acts are constituted of basic units of communication (i.e., illocutionary acts). And within the context of uttering words, phrases, sentences and so on, certain processes may be assumed to be taking place. Such processes may involve certain perceptual, linguistic, neurological and related aspects of the total communicative process. These various processes may then be subsumed under a general method of communicating whose basic unit of meaning is the speech act. The guiding principles of dominance and subordination and that of continuance form the basic objectives of the total act of communication.

In reading acts, then, the basic unit of meaning would, like speech acts, be the apprehension of the full intent of illocutionary acts and their perlocutionary effects. In this respect, the argument is for a general theory that is an integral part of overall communicative competence. Ross' (1974) definition of reading is, in this respect,

a contrasting position in that his emphasis appears to be based upon a correspondence theory of language and truth as opposed to an act and achievement centered philosophy of language. However, Ross' views can be seen as compatible if they are subsumed under a general method of inquiry. In so doing it then becomes possible to account for some of the perceptual and linguistic processes underlying reading acts.

In sum, a general theory of reading acts can provide a general method for elaborating the context of the printed word. Drawing as it does from the general theory of speech acts, a powerful method will have been achieved for analysing meaning as it arises in the use of written language.

II. CONCLUSIONS

The basic purpose of this study was to analyse the main concepts of both speech acts and reading acts in order to determine the points of linguistic interface between two somewhat disparate disciplines. The conceptual notion advanced was that of establishing links—links between a general theory of speech acts and some aspects of a general theory of reading acts.

In this respect, there are numbers of important conclusions which can be arrived at on the basis of the viewpoints which have been put forward in this study. The first of these is that a study of language functioning, namely, a study of speech acts has some important implications for the study of reading acts. Herein, we have attempted to draw the distinction between a study of language structures (via a study of syntax which is linguistic and semantic in its

orientation) and a study of how languages are used to communicate meaning (a type of analysis which is essentially philosophical in its orientation).

Todorov (1973) emphasizes this distinction further when he states that we need to recognize the difference in point of view according to whether we see an utterance as a "product of language" (as linguistics does) or as "belonging to a discourse," which represents the rhetorical perspective (p. 1170). This, of course, is the distinction Latham (1973) refers to when he talks of sentence plans as opposed to discourse plans.

The foregoing is not meant as a claim that the distinctions are as acute as to be irreconcilable. On the contrary, the aim of this study was to attempt to see how the one interacts with the other. Heringer (1972), for example, makes the claim that there is a systematic relationship between what a speaker of a language does in uttering sentences of that language and the syntactic form of those utterances. Gordon and Lakoff (1971) have expressed a somewhat similar thesis. Cole and Morgan (1975) report a series of articles, authored by linguists and philosophers, dealing with the view of speech acts as the meeting place for a study of syntax and semantics.

Essentially, the study of speech acts represents a viable and worthwhile enterprise as a prelude to a further study of reading acts. And, in this respect, there is some evidence to show that a number of conceptual links do exist between speech acts and reading acts.

There is, in addition to the conceptual links we have suggested, another aspect of the work in ordinary language philosophy which has

had an important effect upon a number of areas of study. Basically, this is the work on linguistic and philosophical methodology developed by Wittgenstein (1953) and Austin (1962). As Stern (1972) says, linguistic philosophers are interested in the types of uses of words and sentence uses, the "concepts which are expressed in the words and expressions, and in the logical relations between them" (p. 3). The goal of this kind of methodology is clarity—clarity concerning the use of ordinary language expressions relevant to the solution or dissolution of a philosophical problem. On the one hand, Wittgenstein's analysis of ordinary language covers the area of philosophical predicaments generally; his concern was with what he called "deep conceptual distortions." For Austin, the "minute analysis of clusters of associated uses of words" is that area which held his most intense interest.

The combination of these two approaches to linguistic analysis has proved to be a most perspicuous form of analysis of concepts in a number of wide-ranging disciplines. In this study, we have been able to see the value of this kind of analysis in Stern's (1972) efforts at elucidating the term "comprehension" as it is employed in the field of reading methodology.

Having mentioned the contribution that ordinary language philosophy as a method of analysis can make regarding the use we make of concepts in reading, it would seem appropriate that we come to some conclusions regarding the value of speech acts as an explanatory thesis of some aspects of reading acts. One of the major conclusions which can be deduced from this study is that the use of traditional

theories of meaning to define reading concepts should be replaced with more consistent theories of meaning. At present there are two major philosophical theories of meaning which have attracted the current interests of philosophers and linguists. The first of these is Wittgenstein's theory of meaning as use. Ostensibly, there is much to this theory which is vague and ambiguous. Nevertheless, there is much to commend it and when considered in light of a speech act theory of meaning, it presents us with the possibility of further clarification and development.

The second theory of meaning, that developed by Grice (1957), represents what Searle (1969) calls an intentional/causal theory of meaning. This theory of meaning-as-intention has been adopted by many of the generative semanticists as a theory of meaning. Wright (in Cole and Morgan, 1975), for example, has developed a modified definition of Gricean meaning to explain its relationship to conversational implicature. Furthermore, Searle's (1969) speech act theory of meaning is, as he states, an amended version of the original Gricean formulation.

As an explanatory thesis, the doctrine of meaning as a complex and reflexive set of intentions, seems, in principle, to be sound. The problem of circularity, which has been mentioned by Searle and others, is a valid criticism of the original thesis and Grice (1968) has gone to some pains in dealing with these objections. Brown (1975) claims that the theory suffers from the shortcomings that where the communication is linguistic, the speaker's act is indeed conventional; and if the speaker makes a mistake in the employment of the conventions,

the meaning of the utterance cannot be equated with what the speaker means by it, or with his intention (p. 11). Brown feels that it is more appropriate to say that the meaning of an utterance is what the hearer is entitled to take the speaker to intend to convey by it (a very general formulation which can be specially interpreted to cover sense, reference, force and whatever other modes of signification an utterance has).

The remaining areas which lend promise for the field of reading acts have to do with the area of beginning reading and the reading theory developed by Rumelhart (1976) and others.

The area of beginning reading is one area that has received little examination in this study. There are, however, some interesting developments which have come to force which have necessitated a brief mention as they are specifically related to speech act theory. The work of Bruner (1975) and Dore (1975) in the development of language has some important implications for the area of beginning reading.

Finally, the revision of Rumelhart's (1976) stage representation serves as an exemplar of a general theory of reading acts. It is basically the first step in elucidating the role that larger stretches of discourse play in the elucidation of meaning from the printed page. Reading is, as Rumelhart states, a highly interactive process. The basic relationship between speech acts and reading acts can be realized in the correspondence of phonological, syntactic and semantic aspects of both spoken and written discourse. Reading acts are, as Anderson (1977) states, an integral part of the total communicative process where the derivation of the full meaning from the text entails such

basic notions as sense, reference, truth value, illocutionary force, perlocutionary effect, and significance.

III. IMPLICATIONS

Philosophical Method in Ordinary Language Philosophy

One of the basic implications ordinary language philosophy has for the field of reading methodology is its use of philosophical analysis in defining the terms we use in our practice. Stern (1971) has shown the value of this form of analysis in the elucidation of one of the core terms in reading methodology.

In surveying the literature of ordinary language philosophy, one soon finds a number of techniques for analysis that are worth noting. For the sake of brevity, two major philosophical methods present themselves: Wittgenstein's mode of linguistic analysis and Austin's methodology.

Wittgenstein's mode of linguistic analysis. The first of these represents a method of analysis which was derived from Wittgenstein's writings in that he never explicitly set forth his mode of linguistic analysis. In The Brown Book, Wittgenstein offers a brief characterization of his way of doing linguistic analysis:

> The explanation of the use of a word . . . essentially consists in describing a selection of examples exhibiting characteristic features, some examples showing these features in exaggeration, others showing transitions, certain series of examples showing the trailing off of such features. (Wittgenstein, 1958, p. 125)

Stern (1971) presents three summary statements as an abridged version of the method of looking closely at the "use of words in their

typical turnings." Hence, to reverse the misapplication of a word, find or invent a collection of samples which contains a pattern of connections and practices for the defective word. The collected samples should be characterized in the following manner:

1. Show the use in exaggeration; or, the samples should disclose the relations of sense and nonsense in the use of the word.

2. Show the use in transitions; or, the samples should exhibit the central or obvious uses (strong family resemblances) and also some intermediate uses (weak family resemblances).

3. Show the trailing off of the word; or, display the similarities in the uses of words which are often overlooked, and display the differences in the uses of words which are treated alike; that is, expose the misleading analogies.

The foregoing represents but an outline for the construction of the method. Stern (1971) amplifies this outline considerably in his analysis. It is important to note here that Wittgenstein stresses the roles that words play in language with particular emphasis being given to the "peculiar roles of certain words to show how their odd use leads to paradoxical situations or absurdities" (in Stern, 1971, pp. 29-30). In Wittgenstein's view, philosophical activity has a therapeutic role to play in the elucidation of misleading and confused uses of language.

Austin's methodology. As we had stated earlier, Austin's approach to language was somewhat unlike Wittgenstein's in that his primary interest lay in "the minute analysis of clusters of associated words." Austin was, in reality, a connoisseur of words and as Roche (1973) notes, a connoisseur's approach to his subject is necessarily descriptive

and therefore in a sense empirical in the extreme (p. 66). Austin outlines three "systematic aids" and "source books" to use and work with (see A Plea for Excuses, 1968, pp. 27-30). The methodology chosen by Austin follows roughly the following format:

> The dictionary should be consulted to discover the extent of the 'family circle' of words one is concerned with; here words related to excuses, accidents, misconceptions, mistakes, etc. Second, common law, particularly the law of tort, should be consulted as this provides a great repository of the use of such words, and of the social contexts in which they arise. And finally, psychology, including anthropology, and animal studies, can be consulted as here also there are stored innumerable accounts and cases of behavior. Some of these will be relevant to, and descriptive of, excuse-making, responsiblity-avoiding, etc. Indeed some of them would undoubtedly have passed unnoticed and unremarked but for the psychologist's interest. There is another 'systematic aid' to the selection and the savoring of the detail, besides one's own memory and imagination, and that is the seminar. This is its own depth sample of language uses and practices, and Austin thought it should always, in principle, be able to agree on what was correct usage in any area. (Urmson, 1967, pp. 24-25, in Faun, 1969, part I).

Stern (1971), of course, develops Austin's methodology to a greater extent in order to use it in his specific task of analysing the term "comprehension." The upshot of his analysis led him to a number of important conclusions regarding the use of the term by reading methodologists. Although we have discussed these findings elsewhere in our study (see Chapter IV), perhaps the most telling observation that Stern comes to is that:

> . . . the education puts in plain sight the ambiguous features in the use of the term . . . I maintain, however, that the analysis . . . indicates the plodding labor of the initial stage of the analysis . . . I now see why there is so much talk about carrying out an analysis and why there are so few analyses. (Stern, 1971, pp. 126-127)

In sum, although it is possible to provide considerable detail

regarding the Austin/Wittgenstein method for analyzing terms, less clarity and specificity is available with respect to describing the general theory of reading acts. However, a general theory is, preferably, a general method for analysing text and like a general theory of speech acts, the general theory of reading acts should be applicable to any act or activity; hence its close relationship to the total communicative process we call language. Thus, in reading a page out of a novel the reader should execute a certain range of acts of language which are of legitimate interest to philosophers as, for example, recognizing that the writer is making a claim, an assertion, or request.

Perhaps the basic value inherent in the general theory of speech acts is that it provides some illuminating views of language and corrects some misinterpretations concerning the role of language in communication. As we have been able to see from the work of Austin (1962) and Searle (1968), it is not the sentence which is the principal unit of analysis. In Searle's view, the basic unit of meaning (in language) is the speech act (or illocutionary act). Correspondingly, in reading acts, the basic unit of (understood) meaning is the reading act. Contained within this definition are such notions as the making of inferences, both logical and pragmatic, of making coordinate reference, and of supplying suppositions concerning the author's intentions. The "meaning" of the written message is, for the reader, the securing of "uptake" on his part wherein the full sense of meaning includes sense, reference, truth value, illocutionary force, perlocutionary effect and significance.

IV. LIMITATIONS OF THE STUDY

1. Throughout the course of the study we have referred to the study of speech acts as being an integral part of the general notion referred to by Austin as "linguistic phenomenology." Some objections to this view are as follows: (a) Linguistic phenomenology is a study of ordinary language. The latter tends to be vague and ambiguous, whereas what is required is preciseness of usage; (b) Philosophical problems are problems about things. Austin (and Searle) have only studied things as reflected in language. This provides a view that is both direct and limited; (c) Even if linguistic analysis can successfully determine the present use of 'X' it cannot yield necessary statements about 'X.' It is the latter that constitutes solutions to philosophical problems.

2. The general theory of speech acts has gone through some considerable revisions since Austin's original formulations. Even Austin did not feel that the theory itself was a completely satisfactory one. No doubt there will be other revisions and, in some cases, whole new theories of speech acts.

3. Perhaps one of the basic problems with the general theory of speech acts is that it seeks to impose a tree-structure system of classification—a hierarchy of branching categories—in a domain which is not generated by any corresponding operation. Although this criticism does seem rather incorrect in its basic assumption, there is neither time nor space in this study for a full-blown argument

against this thesis.[1]

4. The general theory of speech acts presented in this study along with proposed linkage to reading acts, represent untested and unverified hypotheses. Considerable testing and discussion will have to be undertaken in order to move to a more precise delineation of the relationship of speech acts to reading acts.

5. The general theory of speech acts is but a part of the total linguistic phenomenon we call language. Hence, all deliberations regarding the application of the theory of speech acts must be tempered by this consideration.

6. One of the serious weaknesses of this investigation has to do with the blurring of the distinction between act and process. Basically, the confusion has to do with the view of language as a structured, rule-governed entity versus language as it is used for communication. Attempts to subsume reading processes and their attendant theories under the rubric of a general theory of language functioning may not have been an appropriate explanation of the total reading phenomenon and may, in fact represent a misinterpretation of the reading process.

V. SUGGESTIONS FOR FURTHER RESEARCH

1. Stern (1971) makes the point that in the field of reading research careful attention must be paid to the terminology used in

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[1] See L. J. Cohen (1973) for further discussion on this point. In my view, the theory of speech acts is not a tree-structure representation.

describing the reading process. In his analysis of the term "comprehension" as it is used by reading methodologists, he utilized the methodological techniques of Wittgenstein (1953) and Austin (1962) as a basis for this analysis. The fact that this method of linguistic analysis represents a powerful tool for the analysis of the concepts we use to describe the reading process and its outcomes suggests that this technique be utilized as a means of clarifying our understanding and use of these terms in practice. Since the analysis of the term "comprehension" has yielded important insights into our understanding of its use in an educational context, other important concepts such as "reading process," "knowledge of verbal concepts," and "psycholinguistic guessing game" lend themselves well to such analyses.

2. The area of beginning reading is an area that was touched upon only briefly in this study. It would seem however, that there is much to be gained from an exploration of the concept of beginning reading using the speech act framework developed by Dore (1975) and others. This is especially evident as many learning to read programs are based upon oral language, particularly Language Experience Programs.

3. In one section of our study, we dealt with the question of children's literature and the relationship of a taxonomy of illocutionary acts to the analysis of literary texts. One fruitful area of research in this area might involve the analysis of children's literature using Searle's (1976) taxonomy. In this respect, we might be able to discover those contextual features (i.e., the author's choice of illocutionary acts) which contribute to the value of a

particular literary work.

4. The relationship (or interrelationship) of perlocutionary acts in reading to locutionary and illocutionary acts is one that requires some further research. The claim made in this study is that the perlocutionary act in reading is the reader's response (reaction) to the author's illocutionary intent. Cohen (1973) distinguishes between direct perlocutions and associated perlocutions in order to draw our attention to the fact that there are different kinds of perlocutions. Indeed, as Cohen (1974) points out in a later article, there are further delineations which can be made regarding perlocutions. What is required here is a general theory of perlocutionary acts and Cohen is the only philosopher to date who has attempted such an explication. Since reading acts involve perlocutionary responses to illocutionary acts, this area requires further investigation.

5. The key aspect of the speech act is the illocutionary act, the act performed in saying something. In reading acts, the reader must not only attend to the illocutionary act but the locutionary act, paying special attention to the propositional content of the speech act. Further research is needed in this area which would explore the degree of dependence the reader has upon the propositional act and the illocutionary force of the utterance.

6. Heringer (1972) has stated that there is a systematic relationship between what a speaker of language does in uttering of that language and the syntactic form of those utterances. He goes on to claim that a variety of illocutionary acts may be performed based upon certain intrinsic conditions (felicity conditions). An

explicit account of the process by which such indirect performance takes place is discussed in the latter part of his study. Heringer's study was based upon an examination of a speaker's use of indirect illocutionary acts. The research required at this stage is to determine whether the accomplished reader cues on these relationships in recovering the direct illocutionary act potential of the utterance.

7. Another area of needed research has to do with the necessity to determine whether in fact there is a developmental progression in the emergence of illocutionary acts. Dore (1974) suggests that this is the case. He suggests that the communicative intentions employed by the young child accomplish acts in being said and that they typically exploit the propositional content of the utterance to communicate messages beyond the literal import of the utterances. It is possible that certain kinds of illocutionary acts develop first (Dore's class of "core" communicative intentions comprised of requests, responses and statements). However, further research is needed to verify this claim. Perhaps this research could be tied to Piaget's developmental stages.

VI. CONCLUDING STATEMENT

The craftsman who is engaged in the task of constructing an edifice exercises his craft and his tools with exactness, precision and style. As such, his task is to begin with certain basic structures and through his actions achieve the final goal which is the completed structure.

The speaker is, in like manner, a "binder of parts." In the

course of making an utterance, the speaker discloses the path of his intentions and strives towards the successful completion of his intentions in terms of the subordination, the coordination and the continuance of his acts of speech. Speaking a language, then, is engaging in a form of linguistic activity. Speaking a language is performing speech acts, acts such as making statements, giving comments, asking questions, and so on.

The reader, however, is an "observer of parts." In the course of analysing an utterance, the reader is able to discover the parts of the dialogue, to partition the relevant from the irrelevant and to "secure uptake" concerning authorial intention. Reading acts, as such, are investigative and inquiring acts. Whereas speaking a language is engaging in the performance of speech acts, reading a (written) language is performing reading acts, acts such as the apprehension of perceptual and linguistic cues which are, in turn, subordinated to the recognition of the dominant themes of a text and its subordinate claims. Reading acts involve the reader in acts of critical inquiry into the nature of the text and its meaning.

In sum, the general theory of reading acts represents a general method of inquiry into the basic nature of printed language and its place within the general theory of speech acts. As a general method of inquiry, the theory of reading acts should provide a framework for subsequent study or should lay the groundwork for a more elaborate theory of reading acts.

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